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Military-media relationships : analyzing U.S. Navy Officers' attitudes towards the news media

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THESIS

**MILITARY-MEDIA RELATIONSHIPS: ANALYZING U.S.
NAVY OFFICERS' ATTITUDES TOWARDS THE NEWS
MEDIA**

by

Jesse J. Flores

December 2003

Thesis Advisor:
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**MILITARY-MEDIA RELATIONSHIPS: ANALYZING U.S. NAVY OFFICERS'
ATTITUDES TOWARDS THE NEWS MEDIA**

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN INFORMATION SYSTEMS AND OPERATIONS

from the

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ABSTRACT

A noticeable civil-military gap has emerged in American society where the public does not fully understand the mission of the military, and the military does not understand the expectations and demands of the public in a liberal democracy. Basically, maintaining a good rapport with the media is vital to bridge this ‘civil-military gap.’ Military cooperation with the media by allowing appropriate access enables journalists to communicate with the military base of support in the public, and thus may prove vital to effective military operations. As a result, the public will be better prepared to embrace ‘good news’ stories that are introduced by the military and prepared also to accept the times when a negative story breaks in the news.

From an online survey administered to the unrestricted line (URL) community of Navy officers, this research identifies instances of Navy officer bias that is derived from family background, limited interaction and experience in working with the media, and inherently from bias that is subordinated from senior naval leadership. Based on these findings, the author believes that the U.S. Navy may not continue to mold individuals to think in new and innovative ways for future naval missions unless they are given a much more broader and thorough roadmap of critical thinking and analytical skills; which invariably includes the consideration of military-media relationships when planning and executing military operations.

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TABLE OF CONTENTS

| | | |
|-------------|--|------------|
| I. | INTRODUCTION..... | 1 |
| A. | PURPOSE..... | 1 |
| B. | AREA OF RESEARCH | 3 |
| C. | RESEARCH QUESTIONS..... | 6 |
| 1. | Primary Research Question..... | 6 |
| 2. | Subsidiary Research Questions | 6 |
| D. | METHODOLOGY AND ORGANIZATION..... | 6 |
| E. | BENEFITS OF STUDY..... | 7 |
| II. | MILITARY AND MEDIA BACKGROUND..... | 9 |
| A. | URL EDUCATION AND TRAINING..... | 14 |
| 1. | Flag Officer Media Training..... | 15 |
| 2. | Navy officer Education and Training | 18 |
| B. | NEWS MEDIA | 23 |
| 1. | Definition and Purpose | 23 |
| III. | MILITARY-MEDIA RELATIONSHIP SURVEY | 27 |
| A. | BACKGROUND | 27 |
| B. | THE SURVEY..... | 27 |
| C. | IMPLEMENTING THE SURVEY | 30 |
| 1. | Discussions on Conducting Web-based Surveys | 30 |
| a. | <i>Concerns about Web-based Surveying.....</i> | <i>31</i> |
| b. | <i>Research on Internet-based Surveying</i> | <i>33</i> |
| c. | <i>Developing Web Surveys.....</i> | <i>34</i> |
| d. | <i>Summary.....</i> | <i>35</i> |
| 2. | Bias and Error..... | 35 |
| D. | SURVEY RESULTS AND ANALYSIS..... | 40 |
| IV. | CONCLUSION | 55 |
| A. | RECOMMENDATIONS FROM SURVEY | 56 |
| B. | AREAS FOR FURTHER RESEARCH..... | 62 |
| | APPENDIX A - INSTITUTIONAL REVIEW BOARD PACKAGE | 65 |
| | APPENDIX B - MILITARY MEDIA RELATIONSHIP SURVEY QUESTIONS..... | 71 |
| | APPENDIX C - SURVEY SAID™ STATISTICS AND GRAPHS..... | 81 |
| | APPENDIX D - NAVAL SCIENCE CURRICULUM FOR NROTC AND CORE CURRICULUM FOR NAVAL ACADEMY MIDSHIPMEN..... | 113 |
| | APPENDIX E - NAVY MEDIA TRAINING PROGRAM..... | 119 |
| | APPENDIX F - SURVEY ANALYSIS USING S-PLUS 6.1.2 | 123 |
| | APPENDIX G - UNCLASSIFIED RE-TRANSMISSION OF A SECDEF-CJCS P4...179 | |

| | |
|--|------------|
| LIST OF REFERENCES | 181 |
| INITIAL DISTRIBUTION LIST | 185 |

LIST OF FIGURES

| | |
|---|----|
| Figure 1. Aviation Officer Career Path (From: BUPERS URL community website)..... | 21 |
| Figure 2. Submarine Officer Career Path (From: BUPERS URL community website) | 22 |
| Figure 3. Surface Warfare Officer Career Path (From: BUPERS URL community website)..... | 22 |
| Figure 4. Political views of Navy officers (see Appendix C- Survey Said™ Statistics and Graphs)..... | 42 |
| Figure 5. Navy officers' mother's education (see Appendix C- Survey Said™ Statistics and Graphs)..... | 43 |
| Figure 6. Military keeping the public and media informed (see Appendix C- Survey Said™ Statistics and Graphs) | 45 |
| Figure 7. The graph shows that Navy officers disagree with the notion that the PAO encourages officers to speak with the media openly. (see Appendix C- Survey Said™ Statistics and Graphs) | 46 |
| Figure 8. The following describe the considerations media editors and gatekeepers have in selling news. (see Appendix C- Survey Said™ Statistics and Graphs)..... | 48 |

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LIST OF TABLES

| | | |
|----------|--|----|
| Table 1. | Armed Forces in the Three Eras: The United States (From: Moskos's <i>The Postmodern Military</i>)..... | 10 |
| Table 2. | Studies Comparing Response Rates for E-Mail and Mail Response Modes (From: Schonlau, M., Fricker, R.D., Elliot, M.N., RAND)..... | 38 |
| Table 3. | Types of Survey Errors and Their Source (From: Groves 1998)..... | 39 |
| Table 4. | Respondents answers on their need to know about specific military issues and operations (see Appendix C- Survey Said™ Statistics and Graphs) | 61 |

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I. INTRODUCTION

A. PURPOSE

The underlying problem is that the military and the media hate each other because neither soldiers [or sailors] nor reporters understand the nature of war. The soldiers [and sailors] understand fighting. The journalists understand communications. Neither group knows that the political impact of combat depends on the *communication of the fighting*. The military-media relationship is symbiotic. We [the military] need for them [the media] to see it, because battle is meaningless until it is credibly communicated to the world.¹

It has been almost two hundred years since both the military and media began a relationship in reporting modern day conflict; starting from the early days of William Howard Russell in 1850 (one of the first professional war correspondents), through two World Wars, up to the current War on Terrorism. However, time has not softened the animosity between them. Their conflicts seem to be cyclical, spawning numerous efforts to mitigate the friction between the two entities. As an example, from its inception in 1992, the McCormick Tribune Foundation has sponsored a neutral forum from which journalists and military officers alike discuss issues that arise from their very dissimilar roles in defending America's freedoms.² This forum and a host of other formats, such as print and multimedia, have been dedicated to the veritable topic of military-media relationships. These efforts were focused on the description of the many differences between the military and the media, yet overlooked is the value both entities brought in sustaining U.S. democratic ideals. This study seeks to highlight the positive characteristics of both organizations and how military-media relationships, especially the interactive dynamics of both entities, affect the decision-making process of U.S. Navy officers and, ultimately, influences the perception of the civilian community who observes them both.

¹ Harry F. Noyes, III, Maj., USAR, "Like It or Not, The Armed Forces Need the Media," ARMY 42 (June 1992), p. 33. Emphasis in original.

² Ethiel, Nancy. "The Military, the Media and the Administration: An Irregular Triangle." The McCormick Tribune Foundation, Copyright 2002, p. 5. Cantigny Conference Series, Conference Report.

According to General Bernard Trainor, both the [sailor] and the reporter seem to be idealists. They look for the ideal world. They are both mission-oriented. They treat their mission as a sacred trust. They are both basically honest, yet they know that their honesty is sometimes fungible, because let's face it, there is dishonesty in the military and in the journalist's profession. Finally, they are both dedicated to what they are doing.³

Therefore, the recommendations from this thesis serve to prescribe means to foster institutional trust in the military-media relationship. In particular, the focus is upon U.S. Navy officers and the news media; creating trust beyond mere personal relationships. Meaningful, mutually beneficial, collaborative relationships between the media and the military are vital to the existence of a democratic society. However, there are inherent tensions in this relationship.

Part of the problem is the disparate roles of the military and media in society. Both serve to defend the right of free speech afforded by the First Amendment of the U.S. Constitution. However, the military and the media differ in their methods of executing this defense. The press has been given the inherent right to report to the American public transgressions of government and since the military is under civilian control, the military falls under the same circumstance. The military on the other hand is sworn to defend these ideals by taking up arms in its defense. Both have very different organizational agendas and objectives; to meet these objectives the media must gather information while the military must restrict information.

An adequately informed populace can more effectively communicate their desires to their elected officials but to be adequately informed, the populace requires and demands accurate information. The U.S. population receives a majority of their information through mass media whether it is in the form of newspapers, magazines, television, or documentaries. Therefore it behooves the military to provide the public with the most timely and accurate information that national security will allow. Trust,

³ Trainor, Bernard E. *Military Perspectives on Humanitarian Intervention and Military-Media Relations*. Chester W. Nimitz Memorial Lectures in National Security Affairs, Departments of Military Education, International and Area Studies, UC Berkeley, 1995. p. 31.

integrity, and accountability between both the military and news institutions have been central themes that have crept up from time to time in the process of building their relationship. However, elements of mistrust, misunderstanding, and a misalignment of organizational obligations, and basic miscommunication are factors that “stain” a beautiful thing.

This thesis and the recommendations provide a means of identifying possible factors that may create bias in U.S. Navy officers against the media. Once identified, these bias factors, through planned and coordinated education and operational experience, can be mitigated. A reduction, or elimination of bias against the media should result in improved information flow to the American public, thereby creating more understanding of the military’s mission (by the American public), thereby garnering greater public support for the military mission, which ultimately improves the military’s ability to conduct its mission and reach operational objectives.

B. AREA OF RESEARCH

The term media, which this thesis uses abundantly, alludes to both the organizations as well as the people that make up the “news business.” Its Latin translation *medius* means middle or medium, however, the term media has a usage problem with its definition.⁴ In the context of this thesis media are defined as a means of mass news, such as newspapers, magazines, radio, or television. Nevertheless, media can also be interpreted to include the group of journalists and others who constitute the news industry and profession as part of its definition (e.g., CNN, Fox News, CBS, and NBC etc.). It is also important to note that as the author’s message is key so is the medium through which that message is transmitted. It would therefore be safe to assume that media includes the technical and non-technical means of transmission of the data.

The military in the study is limited to Navy officers of the unrestricted line (URL) community (not Navy officers which would include Marine Corps Officers in the population).⁵ The Navy URL represents the demographic of Navy officials most sought

⁴ Defined from <http://dictionary.reference.com/search?r=2&q=media>.

⁵ An Unrestricted Line Officer in the Navy are those officers who are eligible for command at sea (surface Warfare Officers, Aviators, and Submariners).

by the media for information regarding military events, therefore, if a negative media bias exists in this demographic it is most likely to cause the information flow from the military to the public (through the media) to be corrupted.⁶ The focus on surface, aviation, and submarine officers is made because not only are these leaders at the frontline of the battle so to speak, but they also command, train, and set the standards of naval military professionalism. Moreover, if a shift in attitudes is to occur, this is the subset of the overall Navy officer population that would have the most influence in changing the policies and procedures that allow bias to exist in the first place.

For the purposes of this research, bias is understood as something akin to prejudice. If one wants to discuss bias and its affect on relationships, especially between the Navy and the media, one should start with the work of Gordon Allport. In his definitive work – “The Nature of Prejudice,” he concludes that prejudice exists in our society but it does not serve a functional purpose. In fact he mentions that prejudice within the social and personality structure are “simultaneously present and form parts of single story.”⁷ Organizations as well as individuals who practice prejudice fall into two groups – those who are proactive and those who are complicit. Even though Navy officers display strains of both qualities, the U.S. Navy, just like Allport, concludes that prejudices have no business “in the workplace” much less a military operation. Navy officers, especially those in the URL communities are at the “tip of the operational spear” for U.S. policy enforcement. They have the propensity to provide first-hand accounts and commentary on the events of a military operation. The news media are the conduit for the successful (and failed) transmission of the messages of these missions to the American public. Therefore, any interruption of this vital communication link causes an imbalance not only amongst military professionals and journalists, but also among the government and civilian leaders the U.S. Navy receives orders from. For Allport, any

⁶ Raja Holavanahali and CDR John C. Fuller from SWONET support provided one means of accessing the URL community, specifically Surface Warfare Officers through their professional website <http://www.swonet.com>.

⁷ Allport, Gordon W. *The Nature of Prejudice*. Cambridge, MA., Addison-Wesley Publishing Company, Inc., 1954. p. 514.

entrance of prejudice [or bias] into a functioning process such as military-media relationships would not be appropriate.

This thesis follows the work of LT Shawn Bohrer whose research provided a historical review of the military-media relationships.⁸ Using case studies of news media coverage of modern armed conflict, LT Bohrer chronicled the straining of military-media relationships and explored the necessity of both the media and military in maintaining a strong America. He concluded that military commanders need to understand the purpose and function of the media's role in war reporting: the news media serve as an independent and honest link between the military at war and the wider civilian society it is sworn to defend.⁹

While LT Bohrer takes a broad view of military-media relationships, this study delves into the root causes that may upset the balance between Navy military professionals and the news media. To a large degree, the bias displayed by Navy officers in this sample study is derived from experiences in their childhood prior to the start their military service. By identifying and improving upon this relationship, the Navy officer, specifically those within the unrestricted line communities (URL: aviation, surface, and submariners), will understand that the media is not only essential to a strong democratic society, but also a valuable ally when managing military operations ranging from peacetime to strategic planning.

So what is an effective mechanism that ensures an uninterrupted pathway in the military-media relationship process? Education is one of the keys towards improving, defending against, and preventing bias from interfering with a smooth operating process. This is what Allport surmised when he asked the question, "Are better educated people more tolerant than less educated?" For him, it seems that higher education lessens feelings of insecurity and anxiety. Education also enables the individual to see the social

⁸ Bohrer, Shawn A. *Military-Media Relationships: Identifying and Mitigating Military-Media Biases To Improve Future Military Operations*. The Naval Postgraduate School, Monterey, CA, March 2003. Information Systems and Operations (ISO) Code 356 Thesis.

⁹ Offley, Ed. *Pen & Sword, A Journalist's Guide to Covering the Military*. Oak Park, IL, Marion Street Press, Inc., 2001. p. 15.

scene as a whole, hence, the welfare of one group is linked to the welfare of all groups.¹⁰ In order to educate the individual, factors that create bias need to be identified.

Through an online survey given to a sample of Navy officer, this thesis was able to identify possible biases. The study suggests that over the course of the Navy officer's career, during specific opportunities of continuing education, such as commissioning source, professional military education, and career warfare school refreshers (Department Head, Prospective Executive Officer (PXO), Prospective Commanding Officer (PCO), etc.), the Department of the Navy can optimize the time and resources of its officer corps towards mitigating these sources of bias. It is through this multi-faceted approach (education, training, experience) that Navy officers can effectively navigate potential military-media issues thus molding officers into innovative multi-tasked & multi-thinking individuals.

C. RESEARCH QUESTIONS

1. Primary Research Question

- a) This study presupposes that U.S. Navy officers are biased against the news media. What is the likely source of this bias?

2. Subsidiary Research Questions

- a) Why is a better military-media relationship important to the U.S. Navy?
- b) What can be done to mitigate bias and foster better communication and mutual understanding between Navy officers and the news media?

D. METHODOLOGY AND ORGANIZATION

The study first seeks to verify that a military-media bias exists and then develop mitigating measures to alleviate the adverse affects of bias. The identification of bias is done through an online survey; mitigation recommendations are developed through a study of educational opportunities. An online web survey was developed to meet three

¹⁰ Allport, Gordon W. *The Nature of Prejudice*. Cambridge, MA., Addison-Wesley Publishing Company, Inc., 1954. p. 433.

specific objectives- first, to gather demographic data of the active duty Navy officer respondents; second, determine if there is possible bias by this same Navy officer population towards the news media; and finally, determine how the respondents feel about the military's, specifically the Navy's, role in a post-Cold War/9-11 environment.¹¹

E. BENEFITS OF STUDY

The benefit of a targeted study such as this is to identify bias that could interfere with effective military operations. If this study can identify evidence of bias amongst an operational-oriented corps of Navy officers (aviators, submariners, and surface officers), it might be possible to use the vast resources of the Navy's existing training and education establishment to outline steps to alleviate this bias and enhance military-media relationships. Such a step will transform the Department of Defense by giving its professional military leadership better leverage in preparing for future military operations.

Although this thesis focuses on a single demographic within a single service (Unrestricted Line Officers in the U.S. Navy) the results provide a methodology applicable to all military and government branches as a means of identifying bias between the military and the media. The news media play a pivotal role in American society and should be duly considered in all aspects of military planning. The media are the primary conduit of information from the military to the public. It is through this conduit that the public will see the military as competent defenders of U.S. national security or a bungling, aloof organization more interested in self-preservation than defending the principles of democracy.

¹¹ Data were collected on the Naval Postgraduate School (NPS) Internet server and exported into both the survey software, Survey Said™, database file and spreadsheet format. Using Microsoft Excel™, the data was analyzed with emphasis on the frequency of responses to certain questions, the median of ranked responses to questions, and a selection of several categories to describe respondent's views and opinions on questions posed.

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II. MILITARY AND MEDIA BACKGROUND

For most...the matter of learning is one of personal preference. But for [military] officers, the obligation to learn, to grow in their profession, is clearly a public duty.

-- General Omar N. Bradley¹²

The noted war theorist Carl von Clausewitz states that popular support is a main factor in achieving strategic success on the battlefield.¹³ With the ability of the news media to keep the public immediately informed of events around the globe, popular support is more critical than ever for today's military commanders. To this end, both the news media and the officer corps of America's military must do more to understand each other. Recent trends in the media coverage of armed conflicts have shown a tendency for military commanders to either not understand the purpose of the news media in modern warfare or to have not been prepared to utilize the media as a valuable resource in winning popular support at home.

Not long ago, threats to the United States' national security could easily be generalized into the countries that made up the Communist Bloc (WARSAW PACT nations.). With the fall of the Soviet Union in 1991, the nature of national threats was changed. Previous doctrine was concerned with a possible massive Soviet invasion through the Fulda Gap in Europe; however, the threats to United States' national objectives and interests in the post-Cold War era are ambiguous and regionally focused.

Current American military doctrine refers to operations at the opposite end of the spectrum of conflict as Military Operations Other Than War (MOOTW). MOOTW require high levels of public support since the purpose for U.S. involvement is sometimes vague. Most people do not readily understand how, for instance, the inability to get humanitarian aid to a starving population is a U.S. national objective (as in Somalia).¹⁴

¹² Quoted in "Professional Military Education: An Asset for Peace and Progress," [The Cheney Report] Washington, DC: The Center for Strategic and International Studies, March 1997, p. 17.

¹³ von Clausewitz, Carl. 1976. *On War*. Princeton, NJ: Princeton University Press, p. 363.

¹⁴ Bohrer, Shawn A. *Military-Media Relationships: Identifying and Mitigating Military-Media Biases To Improve Future Military Operations*. The Naval Postgraduate School, Monterey, CA, March 2003.

Table 1. Armed Forces in the Three Eras: The United States (From: Moskos's *The Postmodern Military*)¹⁵

| <i>Forces Variable</i> | <i>Modern (Pre-Cold War) 1900- 1945</i> | <i>Late Modern (Cold War) 1945-1990</i> | <i>Postmodern (Post-Cold War) Since 1990</i> |
|--|---|---|--|
| Perceived Threat | Enemy Invasion | Nuclear War | Subnational (e.g., ethnic violence, terrorism) |
| Force Structure | Mass army, conscription | Large professional army | Small professional army |
| Major Mission Definition | Defense of homeland | Support of alliance | New missions (e.g., peacekeeping, humanitarian) |
| Public Attitude toward Military | Supportive | Ambivalent | Indifferent |
| Media Relations | Incorporated | Manipulated | Courted |
| Conscientious Objection | Limited or prohibited | Routinely permitted | Subsumed under civilian service |

Table 1, illustrates the changes in threats, attitudes, and force structure with regards to the United States' armed forces. The trend of our forces is toward smaller and much smarter compositions, while the threat has become more complex and infers that the threat in any conflict can never be absolutely discounted. Of special note are the attitudes of the civilian populace and the military-media relationship. The notice of the public's once supportive attitude towards the military to their current feeling of indifference, supports the existence of a civil-military gap that was highlighted all the more by former Secretary of Defense William Cohen stating that:

A chasm...developing between the military and civilian worlds, where the civilian world doesn't fully grasp the mission of the military, and the military doesn't understand why the memories of our citizens and civilian policy-makers are so short, or why the criticism is so quick and unrelenting.¹⁶

The military-media relationship has been in a state of flux since the end of World War II. World War II marked a high point and set the benchmark for a mutually

Information Systems and Operations (ISO) Code 356 Thesis.

¹⁵ Moskos, Charles C. *The Postmodern Military: Armed Forces After the Cold War*. New York: Oxford University Press, 2000.

¹⁶ Cohen, William. From 1997 speech at Yale University.

supportive military-media relationship. In more recent conflicts such as Operation Enduring Freedom (OEF) and the subsequent Operation Iraqi Freedom (OIF), there is a better more cooperative stance taken by Pentagon and Department of Defense officials with regards to military-media relationships. Embedded reporters within military units, media training “boot camps” where journalists are put through the rigors of simulated combat are just a few of the examples where a more tolerant, and sensitive policy towards the media’s role in reporting has come about. But this relationship has been shaped from a bedrock of fundamental values: trust, mutual respect, and professionalism despite the very different agendas of each organization. Essentially, the responses to the survey (Navy officers strive to do their job well given the opportunity to learn more skills to do it) convey to the Navy leadership that there is more that they can do. To build institutional trust between two veritable entities such as the military and the media, the Navy must equip its future leaders with the tools to breach the short-term goal of personal readiness, but set its sights further – the future readiness of the U.S. Navy depends on a well-educated, innovative, and adaptive force structure. This begins with a renewed focus on solidifying military-media relationships in light of the changing 21st century environment.

The media have, since the beginning of the United States, been a crucial element of American society. Journalists keep the public informed of local, regional, national and international happenings, and act as watchdogs for the American public. While some have argued over the extent the media should question the government, especially in time of war, the media do serve a valuable role in American society. They help to ensure the rights and freedoms of Americans are protected by providing information on actions that would threaten these ideals. A recent ABC News survey found that nearly 90% of Americans say that a free press is either ‘very important’ or ‘essential’ to them, going further to say that the media should work mainly to question rather than to support the government.¹⁷ However, during a time of war nearly two thirds of the people polled said that the government has the right to prevent the media from reporting information that may divulge military or operational secrets. Looking back to public perceptions during

¹⁷ This survey was conducted on January 12th, 2003; “ABC News Nightline Poll: The Media in Wartime”.

Desert Storm, a 1991 Gallup survey found that four out of five Americans believed that military censorship was a “good idea.”¹⁸

A rift between the military and the media prevents the military from reaching the public with its own story. Fostering a healthy and mutually understanding relationship with the media has big advantages for the military, so long as the media also appreciates and respects the necessity of national security and the effects their far-reaching message can have on strategy and operations. The military-media relationship has been, for the most part, mutually beneficial. In the United States, the First Amendment of the Constitution guarantees freedom of the press, yet during warfare it has always been necessary to limit this freedom for reasons of military secrecy and security.¹⁹

Just as the Gulf War illustrated new methods of bringing the front lines of battle to the American (and international) public, technology is making the public thirstier than ever for up-to-the-minute news coverage. The rise of 24-hour a day cable news stations and news outlets based on Internet technology have connected the public to all corners of the globe, and created a need to feed information to the public.²⁰ As illustrated as far back as the Civil War and Spanish-American War, wars sell newspapers, and in today’s case, garner television viewers and hits on Internet websites.²¹

To what extent then should the media have access to and report on military operations? Most Navy officers in this study say that the media should have complete access, with few exceptions; and even those are debatable (see Appendix G – SECDEF CJCS media guidance). “In recent years, the tendency to formulate U.S. foreign policy with little or no formal debate between the administration and the Congress has left a

¹⁸ Fialka, John. *Hotel Warriors: Covering the Gulf War*. Woodrow Wilson Press: Washington DC, 1992, p. 61-62.

¹⁹ Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; right of the people peaceably to assemble, and to petition the Government for a redress of grievances. The Constitution of the United States of America As Amended. 106th Congress 2d Session, House of Representatives. Document No. 106-214. U.S. Government Printing Office Washington DC: 2000. p. 13.

²⁰ Fox News, MSNBC, CNN, etc.

²¹ When William Randolph Hearst instructed his reporter to stay in Cuba because if he would furnish the pictures, Hearst would furnish the War. Quoted in Knightley’s *The First Casualty*, p. 56.

vacuum that the media has rushed to fill.”²² The need for operational secrecy as well as the requirement to keep the public informed is a delicate balance that, when mishandled, can send the military-media relationship into a disastrous tailspin much like the aftermath of the Vietnam War. However, in the United States the press serves as the first guarantor of our most basic civil rights, and thus has the responsibility to inquire why national policy does not match national strategy. Without the media present on the battlefield, the only story that would reach the American public is that of the government. While the American government undoubtedly prides itself on being the authority of democratic liberties, without the checks and balances provided by the media, rampant mistrust by the American public would be sure to plague reports that are solely provided by the military. For instance, trusted media personnel provide a conduit for military officers to voice their dissension of senior leaders’ decisions by way of unofficial “leaks” of privileged information. The media report this information, it gets debated, a better informed decision is made, and all parties concerned continue their respective roles in the process. Hence, the media serve the function of communicating the conflict to the American people. So, preparation in working with the media must be incorporated into military operations to ensure that reliable, truthful, information is reported and meaningful interaction fostered between both organizations. This will set the stage of shifting military attitudes against the media in the direction of championing concerted efforts with the media.

More recently, in preparation for impending conflict with Iraq, the press pools of the 1990s have been abandoned in favor of the embedded reporter, similar to the days of Vietnam, “when reporters traveled with front-line troops. The Pentagon allowed about 500 reporters to “embed” with various fighting units—living with and reporting on them from deployment right into battle and back home again.”²³ Self imposed guidelines, such as those used in Korea and Vietnam, are being used in conjunction with new rules—which are a result of the improvements in telecommunications and enemy capabilities to

²² Porch, Douglas. No Bad Stories: The American Media-Military Relationship. *Navy War College Review*, Winter 2002.

²³ Johnson, Peter. Reporters Have Own Rules of War, *USA Today*, February 16, 2003. <http://www.usatoday.com/life/2003-02-17-war-sidebar.htm> (March 2003).

geo-locate electronic emissions. Embedding reporters with military units will allow mutual trust to foster between soldiers and reporters and allow the American public to experience the sacrifices made by their soldiers, airmen, and sailors.

A. URL EDUCATION AND TRAINING

Historically, advances in communications, transportation and weapon systems have had profound impacts on military organization, strategy and doctrine. The evolution of mass communications through the 19th and 20th centuries is no exception. Although the media and mass communications exist exclusive of the military, they impact the way militaries conduct operations. Moreover, military operations affect the type of education and training leaders receive, specifically U.S. Navy officerNavy officers in the unrestricted line (URL) communities.

The Navy has an overriding self-interest in getting its overwhelmingly positive story out. To do so, it must communicate the leadership's views from the top down, and improve public affairs education at all levels, but especially among the young officers who will become the next generation of leaders. According to Aukofer and Lawrence, future military leaders do not receive adequate news media education and training as they move through the ranks.²⁴ Senior Navy officers get the media training, Junior officers (JO) do not (unless they are a Public Affairs Officer). Survey analysis show that senior leaders may soften to the media but that is because they receive training. Those senior officers, who do not become hardened or calcified in their attitudes towards the news media, make the best advocates for a more cooperative Navy-media relationship. JO's are young and innovative and if given the media training, at least piecemeal versions of it over their career, they learn a useful skill set over time. Moreover, the analysis indicates that JO's who do not know how to handle the media take a subordinated view passed directly or, in most cases indirectly, from their seniors who may have had a bad experience with the press in the past. Either way, long-term readiness and preparation is key here for young Navy officers.

²⁴ Aukofer, Frank and William P. Lawrence. *America's Team; The Odd Couple—A Report on the Relationship Between the Media and the Military*. The Freedom Forum First Amendment Center: Nashville, TN, 1995, p 5.

Since the media are an organization of people, ultimately the critical human relationship skills in dealing with the media can only be taught through lifelong systematic experiential and schoolhouse pedagogy. It would therefore be useful and germane to the subject of this chapter to explain how a Navy officer's training and education path can give insight into possible solutions towards building and fostering a better military-media relationship.

1. Flag Officer Media Training

U.S Navy officers aspire to command ships at sea; successful command at sea is a prerequisite to achieving Flag rank (Rear Admiral and above). Whereas the ship's captain makes policy onboard his or her own vessel, Admiral's make Navy-wide policy. More significant, however, is that Admiral's may be called upon to advise on U.S. national policy. This highly visible role will inevitably place the Admiral in the media spotlight at some point.

Commander William R. Fenick, the News Desk Director within the Department of the Navy Office of Information is responsible for preparing and training these senior Navy officers to deal with the media. Adhering to the military-media tenets of openness, honesty, and access, he was able to describe the specifics of the type of training senior officers go through as well as the theory behind the curricula.²⁵

The responsibility of training and preparing sailors and marines for any measure of conflict falls under the responsibility of its senior leadership. This same philosophy of preparation holds true when it comes to military-media relationships. In the war of words and messages, education and preparation are key factors. According to this excerpt from the U.S. Air Force Public Affairs Center of Excellence (PACE), media preparation is an all-hands effort (the Depart of Navy Office of Information, would be the closest comparison).

²⁵ Department of Defense (DoD) Directive 5400.13: Current DOD Principles of Information can be found in the final coordination draft of Joint Publication 3-61, Doctrine for Public Affairs in Joint Operations (19 August 2002). This document can be located at www.dtic.mil/doctrine. The finished document is expected to be published in August 03. In implementing the DOD Principles of Information, the combatant commanders shall grant the news media, both civilian and military, access to unclassified joint, combined and unilateral operations, consistent with operations security and prevailing public affairs guidance (PAG).

So that an organization is not caught off guard when the media come calling, it must prepare its senior officials to deal with reporters. In this era, anyone can be tapped to be the company spokesman with very little warning, and the person selected should not be thrust into the spotlight unprepared. In the Air Force, not only should every commander, every program manager, every senior officer know and be able to apply the techniques required to deal effectively with the media, but all Air Force personnel, officer, enlisted, and civilian, should be prepared to talk to the press about their individual pieces of the Air Force story. They must be aware of reporters' styles and techniques, and they must understand how to react in situations in which they're confronted by the media.²⁶

This same philosophy applies to the U.S. Navy and since this study analyzes the attitudes of Navy officers towards the communications media, it is important to address and outline "the standard" for media training in the Navy. According to CDR Fenick, many non-Navy senior officers request this type of customized media training the Navy gives to its senior officers. The popularity, in addition to the effectiveness of this program, may be due in large part to its customization features. The Navy's media training program is tailored to the trainee to provide them with the factors and skills they require. [Appendix E](#) outlines a sample training request for National Aeronautics and Space Agency (NASA) Shuttle Program Officials, Bryan O'Conner and Bill Parsons. Because it is personalized, the duration of training may vary, but in the media training example in Appendix E, the training took approximately three hours. General highlights of the training, include a media training brief (of which the notes are included in Appendix E), an interview, remote interview, media ambush (involves a question the trainee might not be prepared to answer), and a press conference. Every stage of the training allows the trainee the opportunity for self-assessment and critique by the individual themselves (they are being recorded as part of on-camera practice) as well as the media center staff.

Comparing this type of preparation to a commercially available product like MediaWorks Group, a company founded by Mark Berheimer, for business and professional executives is necessary because the same skills taught by the U.S. Navy is

²⁶ "Meeting the Media: A practical guide to assist military personnel and DoD civilians in preparing to speak with representatives of the news media." Compiled and edited by the U.S. Air Force Public Affairs Center of Excellence 2002 edition. College of Aerospace Doctrine, Research and Education, Air University. p 8.

also valued in the private sector.²⁷ Berheimer's organization provides important media training tips to business clients to help them gain effective media communications skills. A summary of some of the advice he gives follow:

- "Never lie"
- Educate reporters in the course of answering questions, few reporters know the topics they are covering. Calmly correct misconceptions, and refer to the reporter for sources of information
- Never say "no comment." Learn various ways to present your basic message and to transition to other points you want to make.
- Never repeat negative language.
- Always answer questions in your own words.
- Treat the interview as a conversation rather than an interrogation, but resist the temptation to buddy-up to a reporter. Also, never use off-color language and don't try to preface any of your remarks with "this is off the record."
- Most reporters will conclude an interview by asking a variation of the question: "Anything else?" Use that opportunity to repeat the message.
- Do not be a robot; let your charisma shine through.

The Navy leadership should find comfort in the fact that there are resources available within the naval organization that conduct this type of customized media training and preparation (as outlined in [Appendix E](#)). As a result, it is not unreasonable that this media program for senior officers should be made available to junior officers over specific points in their career. There has been a steady call by civil and military leadership to strengthen civil-military instruction in professional military education. Furthermore, because a professional working relationship between the military and the media is important, young Navy officers should get training in dealing with the media; they are trainable. Such a step of steady, sustained education coupled with operational experience, will help properly prepare our future Navy leadership. Senior officers that have this practical training are armed with the basic tenets to successfully conduct effective media communications. For instance, in an article by Mark McGuire in which

²⁷ Rowe, Jeff. "Business Tuneup, Mark Bernheimer: Teaching people to deal successfully with the media," Orange County Register, Copyright 2000-2002 my orangecounty.com. Mark Bernheimer's web site is www.mediaworksgroup.com.

he discusses senior officer and strategic leadership development, several respondents he polled recommended conducting professional military education *earlier* in officers' careers to provide an enhanced awareness of national and international security strategy.²⁸

2. Navy officer Education and Training

Clearly, it should be easier to mold the attitudes among personnel in the Navy, since it is more homogeneous, hierarchical, and disciplined than the news media. Additionally, the military profession is unique in that there is little or no middle- or top-level entry. Personnel start at the bottom and work their way up, providing an extended period in which education and attitude development can be accomplished.

Research for this study indicates that military leaders need to better explain to personnel, particularly those in the junior ranks, that the democratic system is vitally dependent on an informed public and that the news media is society's key institution for this function. For the good of this country, therefore, Navy officers, have an obligation to help the press fulfill its role. Military leaders should stress that, because war is such a significant national event, the American people deserve to know as much as possible about its conduct.

The armed forces have a well-defined system of formal Professional Military Education (PME) which is separate and distinct from training in such warfare skills, tactics, weapon systems operation, etc. (see Figures 1, 2, & 3). It is through this system that the URL officers receive formal education and can learn their responsibilities towards the news media.

There are five levels of PME, each available to officers of certain rank/experience, as follows: pre-commissioning (cadets, midshipmen, officer candidates), primary (O-3), intermediate (O-4), senior (O-5, O-6) and Capstone (O-7). Most of the programs at the intermediate and senior level are nine- to 10-months duration taught at the Army War College, Naval War College, Air University, Marine Corps University, the National War College, the Industrial College of the Armed Forces, Army Command and

²⁸ McGuire, Mark A. *Senior Officers and Senior Leader Development*. JFQ Autumn/Winter 2001-02, p. 91-96. http://www.dtic.mil/doctrine/jel/jfq_pubs/1829.pdf.

General Staff College and the Armed Forces Staff College. Looking at the options above, it seems that the military finds it important to educate its senior officers in media relations, but not the junior officers.

The major role of the pre-commissioning source schools is to establish the attitudinal foundation on which future military officers build throughout their careers, and this is the area where the most emphasis should be given. In addition to the prescribed academic course load, media training can be accomplished through lectures and discussions with academy leaders and guest speakers, including those from the media professions. It is absolutely vital that fledgling officers adopt a healthy attitude towards the news media, for this sets the course for the remainder of their careers.²⁹

At the U.S. Naval Academy (USNA), in addition to education and training in military operational arts, every midshipman's academic program begins with a core curriculum that includes courses in engineering, science, mathematics, humanities and social science. This is designed to give midshipmen a broad-based education that will qualify them for practically any career field in the Navy or Marine Corps. At the same time, the USNA majors program gives midshipmen the opportunity to develop a particular area of academic interest.

At leading universities across the country, Navy Reserve Officer and Training Corps (NROTC) midshipmen professional and leadership training is developed and nurtured as opposed to just telling future Navy officers about life in the Navy and Marine Corps. Over the course of four years both NROTC and at the Naval Academy midshipmen have professional classroom studies backed by many hours of practical experience in leadership and naval operations, including assignments with Navy and Marine Corps units during summer months.

Over the course of four years, cadets and midshipmen concurrently take military courses that instruct them in warfare fundamentals such as navigation, amphibious warfare, and weapons systems to name a few. Unfortunately, NROTC, OCS, and the

²⁹ Aukofer, Frank and William P. Lawrence. *America's Team; The Odd Couple—A Report on the Relationship Between the Media and the Military*. The Freedom Forum First Amendment Center: Nashville, TN, 1995, p 81.

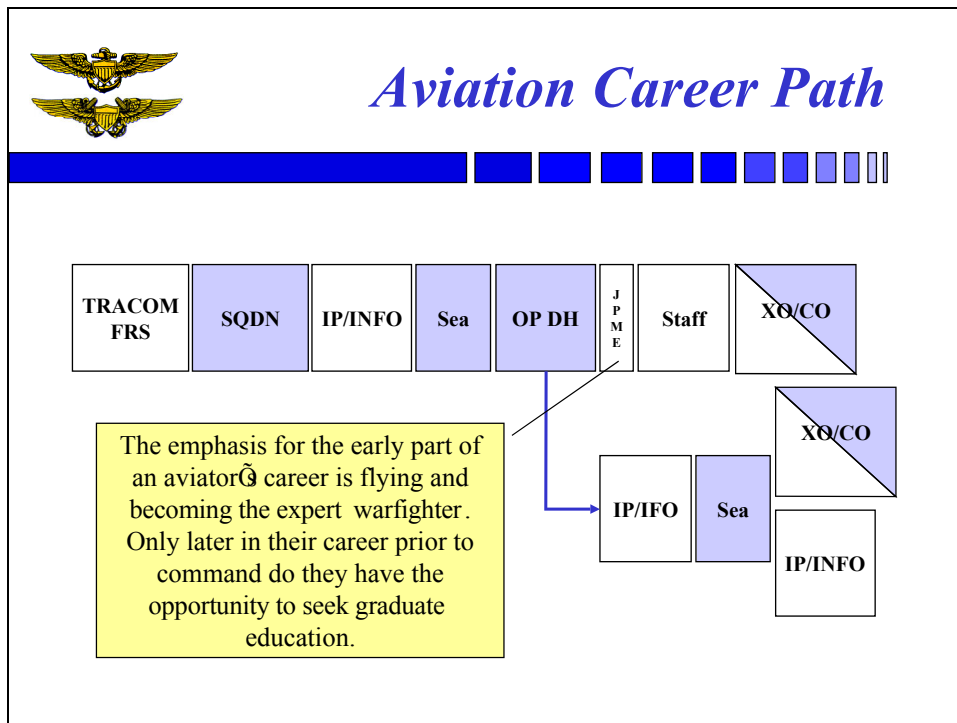
academy programs offer no training concerning the news media. The NROTC program provides a singular opportunity to increase contacts between the military and future civilian leaders. It should be recognized that NROTC not only recruits high-quality young officers, but could also create relationships between elite youth and the military. It could provide the opportunity to expand courses in military history and national security for college students, which are popular courses that are also useful in teaching new generations of leaders about military affairs.

This investment in professional and collegiate education is evidence that institutional education is one of the primary vehicles in which to process the experiences Navy officers will encounter in operational assignments and synthesize into new frameworks for the future. Thus the placement of institutional education that complements and enhances operational assignments is a critical component towards developing successful, well-rounded Navy officers.

Although the Navy has effective senior leader development programs, there is cause for concern. Given increasing mission demands coupled with the broadening complexity, uncertainty, and ambiguity of the global environment, the naval forces must continuously strive to improve professional development, ensuring that leaders are prepared to meet future challenges, including dealing with a rapidly evolving public information environment. There are no easy options, but there are clearly requirements for additional initiatives to offset the effects of a relentless operational tempo.³⁰

³⁰ McGuire, Mark A. Senior Officers and Senior Leader Development. JFQ Autumn/Winter 2001-02, P 91-96. http://www.dtic.mil/doctrine/jel/jfq_pubs/1829.pdf.

Figure 1. Aviation Officer Career Path (From: BUPERS URL community website)³¹

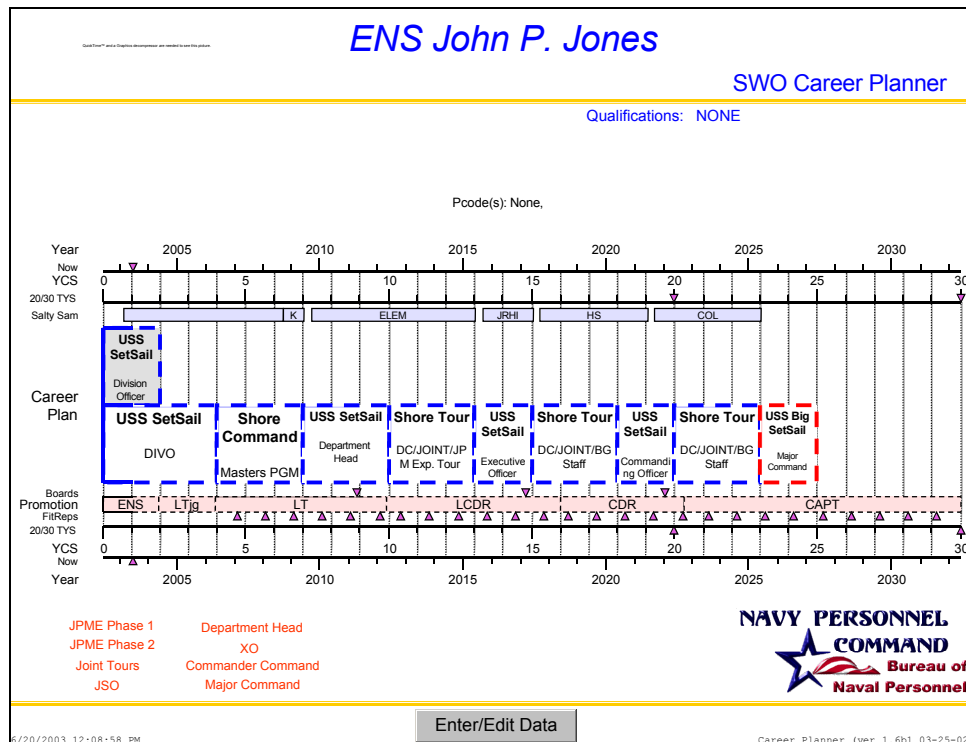


³¹ Career paths summarized from respective URL community managers-
<http://www.bupers.navy.mil/pers2/pers-21.htm#URL>.

Figure 2. Submarine Officer Career Path (From: BUPERS URL community website)



Figure 3. Surface Warfare Officer Career Path (From: BUPERS URL community website)



B. NEWS MEDIA

The military, as an institution, fares very well in public esteem compared to non-governmental institutions such as the media and public schools.³² However, the media are a part of the military operations landscape. The story of the events unfolding for a particular mission will be told, therefore, military leaders, specifically young Navy officers have to influence the message and how it is being transmitted by the news media. The media, like our young Navy officers, need the experiences, the training, and the interaction in order to become better reporters. Navy officers would be wise to learn how the media conveys their stories and to utilize the media to tell Department of Defense stories! Ultimately, Americans want to trust the commanders to whom they have entrusted the lives of their sons and daughters.

1. Definition and Purpose

There is a functionalist perspective when sociologists refer to the media. Functionalists approach the study of mass media from the standpoint that the media contribute to the benefit of society as a whole. In his classic 1975 work, Charles Wright outlines four ways in which the mass media contribute to creating equilibrium in society:³³

- a. The media *coordinate* and *correlate* information that is valuable to the culture.
- b. The media are powerful *agents of socialization*. Through the media, cultural norms and values are communicated to the masses.
- c. The media serve society through *social control*.
- d. By providing *entertainment*, the media act as stress relievers for members of society, which keeps social conflicts to a minimum.

News reporting has been a focus of sociological research into the functions of the media. Both Paul Lazarsfeld and Robert Merton argue that news essentially has two functions when it comes to transmitting social values and norms:

³² Feaver, P.D. and Kohn, R.H. *Soldiers and Civilians: The Civil-Military Gap & National Security*. MIT Press, Cambridge, MA 2001, p. 133.

³³ Wright, Charles. *Mass Communication: A Sociological Perspective*. New York: Random House, 1986.

a. *Status conferral* refers to the importance given some social issues over others in the news media. The fact that certain issues receive attention raises their importance in the eyes of the culture.

b. *The ethicizing effect* suggests that society's norms, values, and beliefs (ethics) are reinforced through media surveillance. By focusing on wrongdoings in society, the media act as a kind of "morality squad." By giving attention to the consequences of criminal and other behavior, the media reinforce ideas of what is good and what is right. This is true not only when the media report facts about crime and deviance (murders, robberies, etc.), but also when they shed light on issues that were intended to remain private, particularly in the case of corporations and governments. President Clinton's encounters with Monica Lewinsky and Prime Minister Chrétien's alleged involvement in the handling of the APEC protesters in 1997 are excellent examples of the media's ethicizing effect.

While these aspects of the mass media can be seen as functional, they also can be interpreted as *dysfunctional*. For example, the media's over-reporting of a bad year in Navy ship mishaps may lead the American public to feel that the U.S. Navy is not safe to get underway, when in fact the opposite may be true.³⁴

Finally, one cannot talk of news media and not mention information technology, particularly the Internet, as playing a role in military-media dynamics. Just a few years ago there was a mid-air collision off Hainan Island in the South China Sea involving a U.S. Navy EP-3 Aries II reconnaissance aircraft and a Chinese F-8 fighter on April 1, 2001. Both the Chinese and U.S. governments took starkly different political positions over the incident. What was interesting was how information from both sides became accessible to reporters, common citizens, in the U.S. and around the world. This allowed both countries to have an influence on events as they unfolded real-time. According to Ed Offley, four *technological* capabilities played key roles in the EP-3 incident: (1) the use of Internet portals and websites by both governments to disseminate and update information on the ongoing incident; (2) the widespread publishing of independent,

³⁴ Maurin, Peter. "Mass Media, A Canadian Perspective." Mohawk College <http://www.prenticehall.ca/divisions/hss/macionis/massmedia.html>.

civilian satellite photographs of the aircraft to confirm and show its location on Hainan Island; (3) the use of digital videophone images by CNN to make a covert, live broadcast of the EP-3 aircrew boarding a commercial aircraft upon release from detention; and (4) the fusion of video, audio and text into true multimedia presentations via media Internet sites.³⁵ The point here is the military and the media alike are navigating new terrain, from the proliferation of news outlets to new circumstances in the battlefield to the instantaneous dissemination of information. By and large, each institution is meeting the other's needs.

Now, more than ever, the Internet directly involves American journalists and ordinary citizens in our nation's operations – in peace and in war. Not only does this increase the complexities of how the military presents its message to the public, so too must the news media find a balance in *how* the U.S. military's message is reported to American citizens; and in some cases the world.

The unique requirements of wartime news coverage impose extraordinary demands on both the military and the press. Special effort is required for the press to report on wars without jeopardizing the military's battlefield effectiveness and without revealing information valuable to the enemy. This can only be accomplished by effective planning and close cooperation with the news media, both before and during a conflict/crisis. It is vital that this be thoroughly understood by all in the military.

Since this section discusses the need to educate Navy officers to change their attitudes, the next section cites the necessary evidence of the root causes of military bias against the news media.

³⁵ Offley, Ed. *Pen & Sword, A Journalist's Guide to Covering the Military*. Marion Street Press, Inc., 2001, Oak Park, IL. p. 195-196.

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III. MILITARY-MEDIA RELATIONSHIP SURVEY

...we in the armed forces of the United States must account for our actions with the American people whom we serve, by dealing openly and well with the representatives of the nation's free press. We are also responsible for protecting classified or sensitive information related to the national security and will be challenged by the news media concerning such information. It is our duty as members of the Armed Forces to balance these demands in a responsible and intelligent fashion.

--Joint Pub 1, Joint Warfare of the Armed Forces of the United States

A. BACKGROUND

In 1999, as part of the Cantigny Conference Series, a survey commissioned by the Robert R. McCormick Tribune Foundation and conducted by the Gallup Organization, polled the American public, one-and two-star officers in the United States military, and representatives of the media. The study showed that considerable bias exists between the media and the military and points to specific reasons for that bias—with the major reasons for bias being that military officers, editors, and other media “gatekeepers” are more interested in selling “their” news rather than accurate reporting. Moreover, the media, through negligence and lack of ethos in their reporting, threaten national security and military operations. The McCormick survey demonstrated military bias against the media at the upper tier of military leadership, this thesis’ survey was engineered to extend the military polling to the more junior ranks of Navy officerNavy officers. Doing so may reveal a clear, distinct point in an officer's lifetime in which these biases are developed towards the media.

B. THE SURVEY

Using the 1999 survey conducted by the Gallup organization as the control survey, this study modeled its questions in the same format. The intent was to see if answers from the 1999 survey given to senior officers differed from those given to junior officers in the 2003 survey, [Appendix B](#) gives a sample of the same questions that were administered to the survey respondents in 1999. The demographic data allow the researcher to identify cases of bias based on age, rank, gender, educational background,

upbringing, commissioning source, and political views. Once root causes for military-media biases are uncovered, proposed methods to mitigate those biases are recommended to foster a better relationship between these two entities.³⁶

Survey Said™ was the software package used to develop and implement the online survey.³⁷ It was chosen for three specific reasons: ease of use, cost efficiency, and all-around analytic capabilities. Below is a brief overview of the details the software package offers.

Survey Design

General Specifications

- * Questions and Answers in surveys can be used as libraries
- * Duplicate Question facility enables rapid question creation
- * Keyword association with question for rapid identification
- * Search feature finds questions in survey by word or phrase
- * Question text length can be well over 500 characters
- * Individual answer lengths can be well over 100 characters
- * Up to 2000 questions/survey with up to 115 answers/question
- * No Limit to the number of respondents/survey (Survey Said 3)
- * 100% automatic generation of survey onto the mail out diskette
- * 100% automatic generation of printed survey producing survey form
- * 100% automatic generation of HTML and JAVA Internet/Intranet survey
- * Ability to void individual respondents in database
- * Ability to reset the survey database after testing

Survey Administration

Survey Environments

- * Touch Screen PC systems

³⁶ Bohrer, Shawn A. *Military-Media Relationships: Identifying and Mitigating Military-Media Biases To Improve Future Military Operations*. The Naval Postgraduate School, Monterey, CA, March 2003. Information Systems and Operations (ISO) Code 356 Thesis.

³⁷ The user is required to download the demo version of the software package. Once this is done you must work with the Education Analyst within the Office of Academic Administration at NPS in order to have the survey hosted on the NPS internet host server (<http://www.surveysaid.com/>).

- * Standalone desktop PCs
- * Networked PCs on a LAN
- * Networked PCs on a WAN
- * Laptop PCs (road warriors)
- * WEB via Internet Browsers
- * Surveys by Mail Diskette
- * Printed Paper Form Surveys

Cost Effective Licensing

- * Single or Multiple concurrent administrator licenses
- * Single or Multiple concurrent respondent licenses
- * Extremely Cost effective concurrent use licenses
- * Licenses can be purchased from 1 to 1000 administrators
- * Licenses can be purchased from 1 to 1000 respondents
- * Survey Said software meters itself with a licensing file

Survey Analysis

Standard Analysis

- * Frequency of answers by Count and Percent
- * Banner grouping of four questions by a primary
- * Cross tables by primary, secondary and tertiary
- * Verbatim analysis by keyword or phrase matching
- * Code verbatim responses for quantitative analysis
- * Verbatim sorting by a fixed choice question (e.g. age, etc.)
- * Two-dimensional Ranking tables and graphs
- * Multi-Field numeric grouping in variable window size

C. IMPLEMENTING THE SURVEY

The survey was conducted on the Internet, hosted on a Naval Postgraduate School (NPS) server, and directed towards unrestricted line officers (URL) in the United States Navy. In order to comply with NAVPGSCOLINST 3900.4, Protection of Human Subjects, a request, outlined in [Appendix A](#), was submitted to the Institutional Review Board (IRB), along with a copy of the intended survey questions listed in [Appendix B](#). Once approved, the survey, entered into the online survey software processing package, was posted as a link on a website hosted on an NPS server. Email invitations were sent out to Surface Warfare, Aviation, and Submarine Officers within NPS, Department Head School in Newport Rhode Island, Naval War College students, Public Affairs Officers (PAO) of Naval Air Pacific as well as Atlantic, and SWONET – a dedicated website for Surface Officers, and a public website open to URL officers. The form letter, sent via electronic mail, sought random participants to take the survey. Respondents who took the survey remained anonymous and were encouraged to distribute the form via e-mail with attached link to the survey to other officers within their respective commands, schools, or personal email address list. This process introduced possible errors, which will be discussed later, and made tracking the number or controlling who answered (or did not) the survey difficult.

1. Discussions on Conducting Web-based Surveys

The growth of the Internet has impacted virtually every aspect of society; survey research is no exception. Four years ago in an informal search of Yahoo, Kay and Johnson identified over 2,000 Web-based surveys in 59 areas.³⁸ The interest in Web-based surveying is not surprising as it offers a number of distinct advantages over more traditional mail and phone techniques. These advantages include reducing the time and cost of conducting a survey and avoiding the often error prone and tedious task of data entry.³⁹

³⁸ Kaye B.K. & Johnson T.J. (1999) .Research Methodology: Taming the Cyber Frontier. Social Science Computer Review, 17, P 323-337.

³⁹ Medin, C., Roy, S. & Ann, T. (1999) World Wide Web versus mail surveys: A comparison and report.. Paper presentation at ANZMAC99 Conference, Marketing in the Third Millennium, Sydney, Australia, available from <http://www.anzmac99.unsw.edu.au/anzmacfiles/papers.htm>.

Email offers one option for distributing Internet surveys. Up until a few years ago email surveys were the predominate means of Internet surveying. As the World Wide Web (WWW) has grown in popularity, the use of Hypertext Markup Language (HTML) forms or Web-based surveys are becoming the dominant method of gathering survey data. These forms streamline the data collection process formatting and entering responses directly into a database for analysis. Since HTML forms can be made programmable, it is also possible to have real time error checking and correction increasing the accuracy of the data collection process. The formatting capabilities of HTML allow the creation of easy-to-read and attractive forms that may improve response rates. In addition, the programmability of HTML forms makes it possible to randomly order responses and tailor options based on information the respondent supplies earlier in the survey.

Combining an email "cover letter" as a means of contacting sampled people with the use of an HTML form for data collection provides an especially effective and efficient approach to Internet surveying. Modern email packages automatically convert universal resource locators (URLs) or web-addresses in the text of an email into hyperlinks. Placing the URL of the survey form in a cover letter email allows the respondent to "click" their mouse on the URL to display the survey form and subsequently fill it out.

a. Concerns about Web-based Surveying

Although Web-based surveying is very attractive, because it is still a relatively new way of conducting survey compared to the gold-standard of personal interviews or written solicitation, it should be used with caution. Currently the biggest concern in Internet surveying is coverage bias or bias due to sampled people not having or choosing not to access the Internet (Kay & Johnson, 1999; Crawford, Couper & Lamias, 2001). Despite exponential growth of the Internet there are still large numbers of people who do not have access and/or choose not to use the Internet. It is also clear that there are wide disparities in Internet access among ethnic and socioeconomic groups (Selwyn & Robson, 1998).

There are specific populations where Internet access is extremely high and coverage bias is likely to be less of a concern. The United States Air Force (USAF) Surveys branch, an office of the Air Force Personnel Center at Randolph Air Force Base, San Antonio, Texas, surveys Air Force active-duty personnel and their family members, Air Force civilian employees, Air National Guard and Air Force Reserve personnel and their dependents, and Air Force retirees. The USAF Surveys Branch previously conducted paper-based surveys via postal mail, but it has recently converted to conducting surveys entirely over the Internet. The office is staffed with only four people who are responsible for drafting, fielding, and analyzing surveys of more than 350,000 active-duty Air Force personnel located throughout the world.

The success of this electronic approach, used extensively by the U.S. Air Force (USAF), is attributable to three factors. First, the standardized email address system provides an easy means to contact a random sample from a closed population that can be completely enumerated. Second, the USAF Surveys Branch has detailed information on its entire population of interest. Third, most of the population has ready access to computers that are fairly standardized, so respondents can reasonably be expected to have access to a Web-access instrument and browser and, therefore, other software problems are minimized.⁴⁰ The population of Navy URL officers falls into this same category so there was not a problem with officers not having access to the Internet to take the survey.

Web-based surveying is still in the early stages of development. The World-Wide Web (WWW) is a unique medium and it is not clear to what extent the knowledge gained over years of experience with more traditional surveying techniques fully applies to Internet surveying (Dilman, Tortora & Bowker, 2001). Studies are just beginning to be done to learn the optimal ways to structure and format Internet surveys to limit biases and increase response rates. It is also likely that the best way to design an Internet survey depends in part on the familiarity and comfort of the respondents in using Web browsers and email clients. It is also quite likely that the type of Internet connection

⁴⁰ Schonalu, Fricker, and Elliot. *Conducting Research Surveys via E-Mail and the Web*. Arlington, VA., RAND, 2002. p 56-57.

as well as the hardware and software used in accessing the Internet will impact on response rates and possibly how a person responds to an Internet-based survey. However, the Navy has mandated that all of its officers have access to computer-based communications (through its Information Technology 21 [IT21] program), so URL officers are connected or have access to the World Wide Web.⁴¹ Even still, access does not address the problem of bandwidth. Sailors and Marines may have access at-shore as well as at-sea, but limitations in bandwidth (14.4 kbps is still not unheard of) especially for sea-going commands may make taking the survey a tedious task.

The use of HTML forms for surveying poses a unique set of issues and challenges that need to be addressed to ensure valid data. The Web is a very public place and unless steps are taken to limit access to a survey, it may be found and responded to by people who are not among those sampled by the researcher. This can either happen by accident or maliciously. Since one only has to "click" their mouse pointer on the "submit" button to respond to a Web-based survey instrument once it is filled out, it is also quite possible for respondents to either mistakenly or purposefully submit multiple copies of their responses.

While Internet-based surveying techniques need to be used with caution, their benefits warrant continued exploration with cautious use. It is also clear that coverage bias and familiarity with Internet tools will be less of an issue over time. Additionally our knowledge about how best to conduct Internet surveys will continue to improve with research and experience.

b. Research on Internet-based Surveying

Although the research on Internet-based surveying is limited, findings are beginning to appear in the literature. Several studies have found that response rates for Internet surveys are lower than equivalent mail surveys (Medin, Roy & Ann, 1999; Cooper, Blair & Triplett, 1999). As noted by Crawford and colleagues (2001), this may be due to a lack of knowledge on how to achieve high response rates using the Internet surveys. The lower response rates for Internet surveys may also reflect coverage bias, the

⁴¹ NMCI stands for Navy. Marine Corps Internet and is a program designed to bring every sailor and marine access to a network of knowledge and IT capability to function in the 21st century.

lack of familiarity with the media and/or lack of convenient access to the Internet. In the author's experience, Web congestion can also be a factor in lowering response rates for Web surveys particularly with people who have relatively little experience with the Internet. Cook and colleagues (2000) conducted a meta-analysis of factors influencing response rates in Internet-based surveys. They found that follow-up contacts with non-respondents, personalized contacts, and contacting sampled people prior to sending out the survey were the three dominant factors in higher response rates. Kittleson (1997) in a study of email-based surveying found it was possible to double the response rate with follow-up memos, though in general this may be somewhat optimistic. As with mailed surveys, repeated follow-ups have diminishing returns and at some point risk irritating potential respondents without noticeably increasing response rates. Additionally, Dillman, Tortora, Conrad & Bowker (2001) found that relatively plain Web surveys that load quickly resulted in higher response rates than "fancier" surveys that take longer to load. Jeavons (1998) analyzed detailed server logs from three separate large-scale surveys. He found a relatively high percentage of potential respondents stopped completing the surveys 1) when encountering the first question, 2) when encountering a complex question grid, and 3) when asked to supply their email address. This suggests that some potential respondents have difficulty with the media and give up early in the process of completing the survey or when encountering complex questions. Others may be reluctant to give out personal information such as an email address. The logs were also merged with demographic data collected via the surveys. Somewhat surprisingly no patterns in failure to complete rates were found by gender, age or education level. In two of the surveys, people with lower income were found to have a higher rate of repeating screens of questions mainly due to improperly filling out questions.

c. Developing Web Surveys

As noted, most Internet surveying is now being done using HTML forms with potential respondents often contacted via email cover letters. While some developers still directly code these forms in HTML, there are dozens of HTML editors available, and they are becoming increasingly sophisticated and easy to use. There are two general methods of capturing the data entered into an HTML form. The form can be programmed to email the data back to a specified email address or captured by a program on the server

called a common gateway interface (CGI) script. Using CGI scripts is more robust, offers more flexibility and is the far more commonly used method of capturing data. There are several HTML development packages that both provide HTML editing capabilities and automate the process of developing the CGI scripts necessary to capture data from HTML forms developed with the package. Two widely used examples of these packages are Microsoft's FrontPage and Macromedia's Dreamweaver. While these packages are general-purpose Web development tools, there are also a growing number of software development systems designed specifically for Web-based surveying. Examples include Perseus's Survey Solutions for the Web, Creative Research System's The Survey System, and Survey Said™ Survey Software. These packages tend to offer additional features specific to survey research. Examples include as managing the distribution of email cover letters, built-in statistical analysis and reporting capabilities, and automatic tracking of people who have responded coupled with the ability of sending out follow-up email reminders to those who have yet to respond. Their HTML editors are also geared for survey form development, allowing them to simplify and streamline the process of developing and formatting the question response fields.

d. Summary

Internet surveys are clearly going to grow in popularity as the problems of coverage bias and unfamiliarity with the Internet subside. For the foreseeable future there will be people who will lack Internet access either by choice or circumstance though this will be less of an issue. Additionally the tools for conducting Web-based surveys will grow in sophistication and ease of use as will knowledge on how best to employ this survey methodology. At present researchers should use this technique with caution in carefully chosen populations and with an eye to learning about how to do it better.

2. Bias and Error

It is important to differentiate between survey bias (described below) and human bias. Human prejudice or bias is a hostile attitude toward a person who belongs to a group, simply because he belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to the group.⁴² Bias in a human a process interrupts the

⁴² Allport, Gordon W. *The Nature of Prejudice*. Cambridge, MA., Addison-Wesley Publishing Company, Inc., 1954. P 7.

flow of information just as noise does for a signal in a communication circuit. This flow interruption is in the form of mistrust and in times of crisis the military and the media need to have a relationship of trust. It has to be developed; bias impedes this development.

The general term used to describe the problems that exists when the sample within survey are not representative of the population is also *bias*. Most statistical texts use the terms *representative sample* (good) and *biased sample* (bad). A biased sample has properties of its own that may not match of the larger population. Naturally, one wants the bias (a source of error) to be as small as possible.

There are two sources of bias in survey research. The first is *selection bias*, where there is a systematic difference between the population and the sample, as described in the following examples:

EXAMPLES OF BAD SAMPLES

Bad Sample A: The basketball team as a sample used to study heights of high school students.

Bad Sample B: Your 10 best friends as a sample used to predict the winner of the coming election.

Bad Sample C: The 25 most successful new electronics companies as a sample used to study the financial problems of typical new electronics companies.

Bad Sample D: The opinions of some of the readers of a particular magazine as a sample used to study the opinions of Americans in general.

CONSEQUENCES OF USING BAD SAMPLES

Consequence of using Bad Sample A:

The study may conclude that the general population of students is taller than they really are because basketball players are generally selected from only the tallest members of the available population.

Consequence of using Bad Sample B:

Because people tend to associate with people who agree with their views, this sample will tend to reinforce one's own preference rather than provide an accurate indication of the outcome of the election.

Consequence of using Bad Sample C:

Because only those companies that succeeded were chosen for study, the results can hardly be considered indicative of the problems of "typical" new companies, many of which do not succeed. However, this sample might be very useful for studying the population of new electronics companies that are likely to be successful.

Consequence of using Bad Sample D:

Different sorts of people read different magazines (compare the readership of *Popular Mechanics* to that of *Working Woman*) and therefore, the opinions of the readership will not be representative of the population at large.

The second source of trouble in conducting a survey is *response bias*, because not everyone being studied will return the survey questionnaire. Response rates of over 50% (in which only half of the people contacted returned their forms; see Table 2.) are not uncommon. For the sample to be representative of the population, the hope or the assumption is that those who did not return the questionnaires are not very different from those who did. Although this hope is sometimes justified, usually there is little researchers can do about this problem except to accept it and wish for a small amount of response bias.

Table 2. Studies Comparing Response Rates for E-Mail and Mail Response Modes (From: Schonlau, M., Fricker, R.D., Elliot, M.N., RAND)

| Response Rate | | | | |
|-----------------------------|-------------------|-----------------|----------------|-------------------------------------|
| Study | Total Sample Size | Email Study Arm | Mail Study Arm | Population |
| Tse et al. (1995) | 400 | 6% | 27% | University Staff |
| Tse (1998) | 500 | 7% | 52% | University Staff |
| Schuldt and Totten (1994) | 418 | 19% | 57% | MIS and marketing faculty |
| Kittleson (1995) | 153 | 28% | 78% | Health educators |
| Jones and Pitt (1999) | 200 | 34% | 72% | University Staff |
| Mehta and Sivadas (1995) | 262 | 40% | 45% | BBS newsgroup users |
| Couper et al. (1999) | 8,000 | 43% | 71% | Federal employees |
| Schaefer and Dillman (1998) | 904 | 53% | 58% | Washington State University faculty |
| Parker (1992) | 140 | 68% | 38% | AT&T employees |

To see why response bias might be a problem, consider the fact that those who do not answer a questionnaire might well represent the more active and vocal members of the population. Those with strong opinions and interests will tend to be overrepresented, whereas those who are quiet and content with the status quo (or who are too busy with other things at the moment) will tend to be underrepresented.⁴³

Survey error is commonly characterized in terms of the precision of the statistical estimates. However, characterizing survey error only in terms of standard errors and response rates ignores other ways in which errors can enter the survey process.

Table 3 lists the four general categories of sources of survey error, as defined by Groves as part of his “Total Survey Error” approach.⁴⁴ However, one point of interest is with respect to data quality. The quality of data transcription is an issue with conventional surveys because all conventional surveys require some form of conversion into an electronic format for analysis. With Internet surveys, however, the answers that

⁴³ Siegel, Andrew F. and Morgan, Charles J. Statistics and Data Analysis – An Introduction. Copyright 1996, 1988 by John Wiley and Sons, Inc., p. 295.

⁴⁴ Groves, R. *Survey Errors and Survey Costs*, New York: John Wiley & Sons, 1989.

the respondents enter into an online form oftentimes can be directly downloaded into a database, thereby avoiding transcription errors.⁴⁵

Table 3. Types of Survey Errors and Their Source (From: Groves 1998)

| Error | Source | How this study addressed the issues |
|--------------------|--|---|
| <i>Coverage</i> | Failure to give any chance of sample selection to some individuals in the population | Fleet PAOs were the first points of contacts to get the survey to the fleet URL officers as well as student and staff URL officers. |
| <i>Sampling</i> | Heterogeneity in the survey measure among persons in the population | Every attempt was made to reach all designators within the URL communities (including, race, gender, socioeconomic, rank, etc.) |
| <i>Nonresponse</i> | Failure to collect data on all persons in the sample | A review of survey responses was taken in mid-August 2003 and efforts were redoubled to broadcast the survey link. A form letter was also sent out to the email list the author developed to solicit reasons why the survey was not taken. Several notes were taken: wrong email, address, some officers had retired, students transferred from their commands, and no time to take the survey were among the feedback the author received. |

⁴⁵ Conventional surveys mean face-to-face and telephone interviews. Schonlau, Matthias, Fricker, Ronald D., and Elliot, Marc N. *Conducting Research Surveys via Email and the Web*. RAND 2002. p. 13-14, 18.

| | | |
|--------------------|---|---|
| <i>Measurement</i> | <p>Inaccuracies in responses recorded on the survey instruments that arise from: The efficient interviewers have on respondents' answers to survey questions Respondent error (from the respondent's inability to answer questions, lack of requisite effort to obtain the correct answer, or other psychological factors) Error due to the weakness in the wording of survey questionnaires Error due to effects of the mode of data collection (such as face-to-face or telephone communication).</p> | <p>Appendix C contains the statistical results of survey. Some respondents failed to answer one or two of the questions. Moreover, after review of certain questions, wording may have caused unintended responses. Finally, several questions were formatted in such a way that it made both answering the question and analyzing the responses more tedious than necessary.</p> |
|--------------------|---|---|

D. SURVEY RESULTS AND ANALYSIS

The survey consists of thirty-nine questions of which several groupings of questions sought answers to the following categories:

1. Identify what the demographic factors are so that a reasonable conclusion can be drawn to root causes regarding bias. Even still, when does this bias take root in an officer's career?

For this survey, the demographic summary of the results follows.

- Median age of respondents is 31.
- No ranks above Rear Admiral (Lower/0-7) were part of the respondents. Fifty-five (55) of ninety-three (93) respondents were Lieutenants (O-3).
- Submariners and Surface Warfare Officers responded while no Naval Aviators participated.
- The median commissioning year was 1996, so the average years of Naval Service equal about 7. A majority of the Navy officers sampled received their commissioning from either the U.S. Naval Academy or through a Naval ROTC (Reserve Officer Training Corps) program.
- Eighty-seven (87) males, five (5) females, and one (1) unidentified sex were among those who responded.⁴⁶

⁴⁶ Relative to active duty naval forces this skew in gender appears to be in line when compared to

- 77% of the ninety-three (93) respondents had some post-graduate work completed or a post-graduate degree.
- Over half the respondents stated having conservative political views and many were Republicans (55.91%). One of the questions this study sought to answer was what factors influenced the political views of respondents. Questions 8 and 9 asked the Navy officers to describe whether they were far left or all the way to the right; followed by categorizing their choices into Republican, Democrat, Independent, or no preference. This study found that warfare designation or the type of job the officers were assigned to in the Navy, the year they were born, and mother's education were the key primers in determining their political views. See Figure 4. Political views of Navy officers (See Appendix C – Survey Said TM
- Diverse group of nationalities participated amongst the respondents; Caucasians being the majority.
- Most respondents were raised by parents with higher levels of education. Their fathers had a college degree or higher while their mothers had a high school or higher level of education.
- Finally, the officers sampled come from all over the United States and spent their childhood years in just about every region of the country.

Throughout the study, a comparison among the questions considered the median responses by URL Navy officers. The median and mean are the most common measures of the center of a distribution. The mean and median of a symmetric distribution are close together. If the distribution is exactly symmetric, the mean and the median are exactly the same. In a skewed distribution, the mean is farther out in the long tail than the median. For instance, in this survey the average age of those who responded was [1970.2717, year of birth] about 33 years of age, while the median age was [1972, year of birth] about 31 years of age. Strongly skewed distributions usually give the median (“middle value”) rather than the mean (“arithmetic average value”).⁴⁷ Once again, for details and a full description of each question and the results of the survey see [Appendix C](#).

survey respondents – (<http://www.bupers.navy.mil/mentor/totalforce.html>). Total Force Male – 333,807, 85.40%; Total Force Female – 57,045, 14.6%. Demographics are from a navy website dated March 2002.

⁴⁷ McCabe, G.P., Moore, D.S. *Introduction to the Practice of Statistics*. W.H. Freeman Company, NY. 3rd Ed., 1999, p. 43.

Figure 4. Political views of Navy officers (see Appendix C- Survey Said™ Statistics and Graphs)

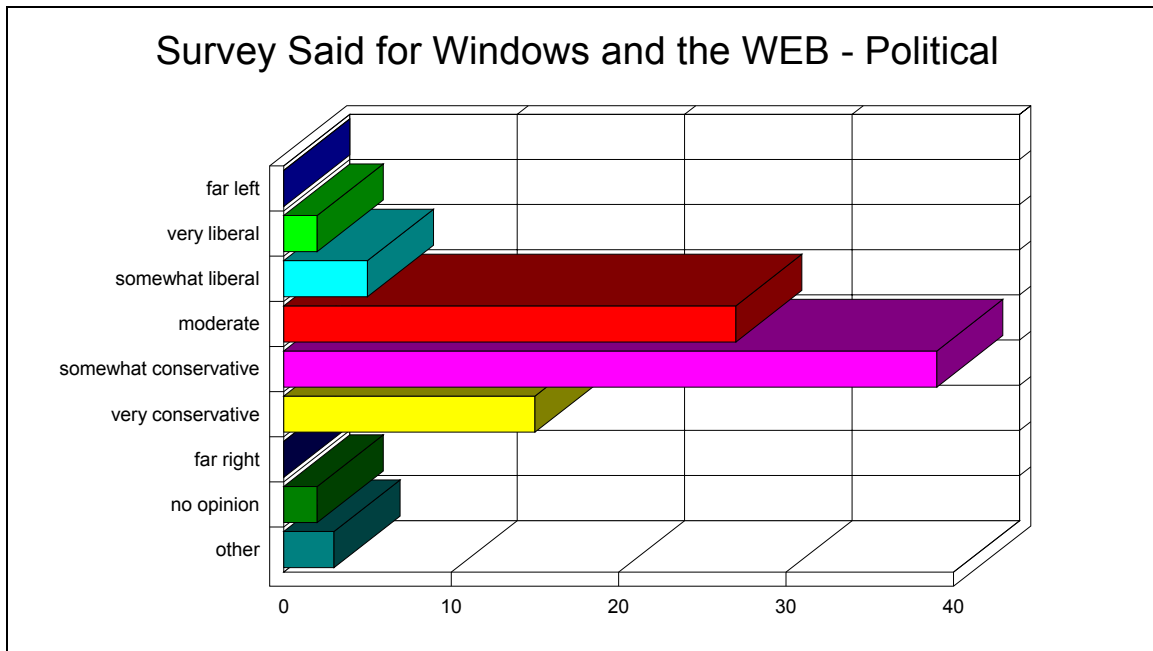
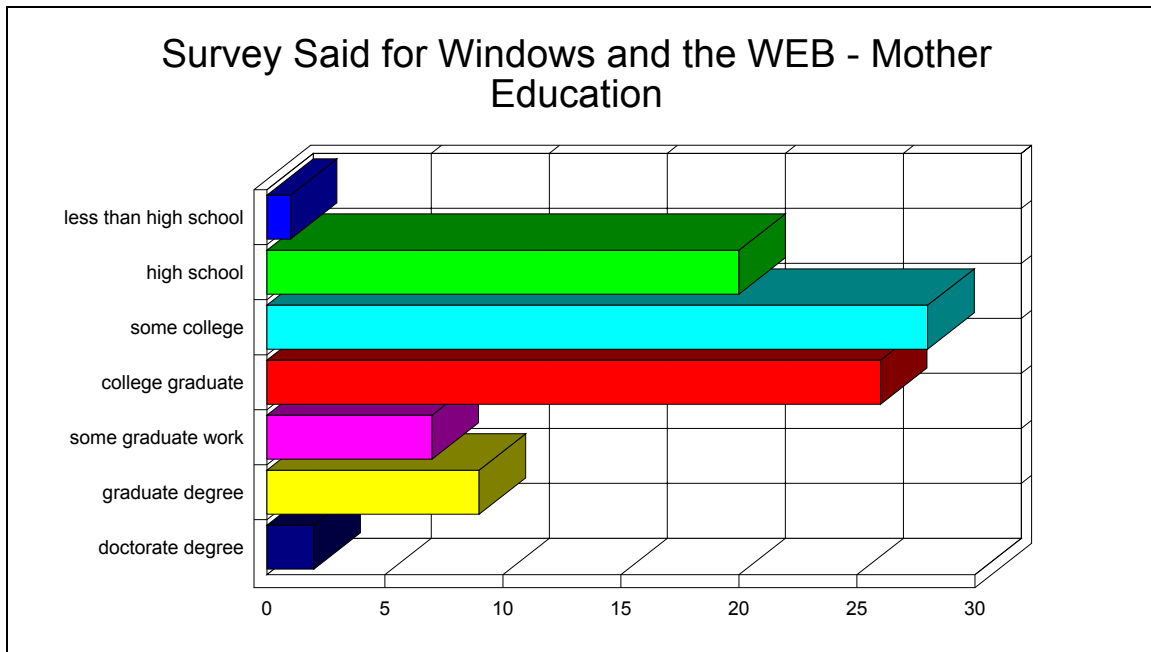


Figure 5. Navy officers' mother's education (see Appendix C- Survey Said™ Statistics and Graphs)



The statistical test to determine if there is a correlation between the variables of political views against demographic variables of designator, year commissioned, and mother's education, shows there is some correlation occurring (refer to Appendix F for significance of p-value in a statistical test).

RESULTS (Navy officer's mother's education):

$Q(8/9, 2)$, *K-Wallis*, Correlation: **p-value = 0.021**

$Q(8/9, 3)$, *Spearman*, Correlation: **p-value = 0.014**

$Q(8/9, 11)$, *Spearman*, Correlation: **p-value = 0.0206** (compared with father's education, p-value = 0.3207)

These data of the officer's mother's education display a stronger correlation with regards to the officer's political views than that of the father's education. Based on this p-value significance, this study infers that the mother may be more of an influencing factor than the father on the officer's political perception. Hence, this contribution can

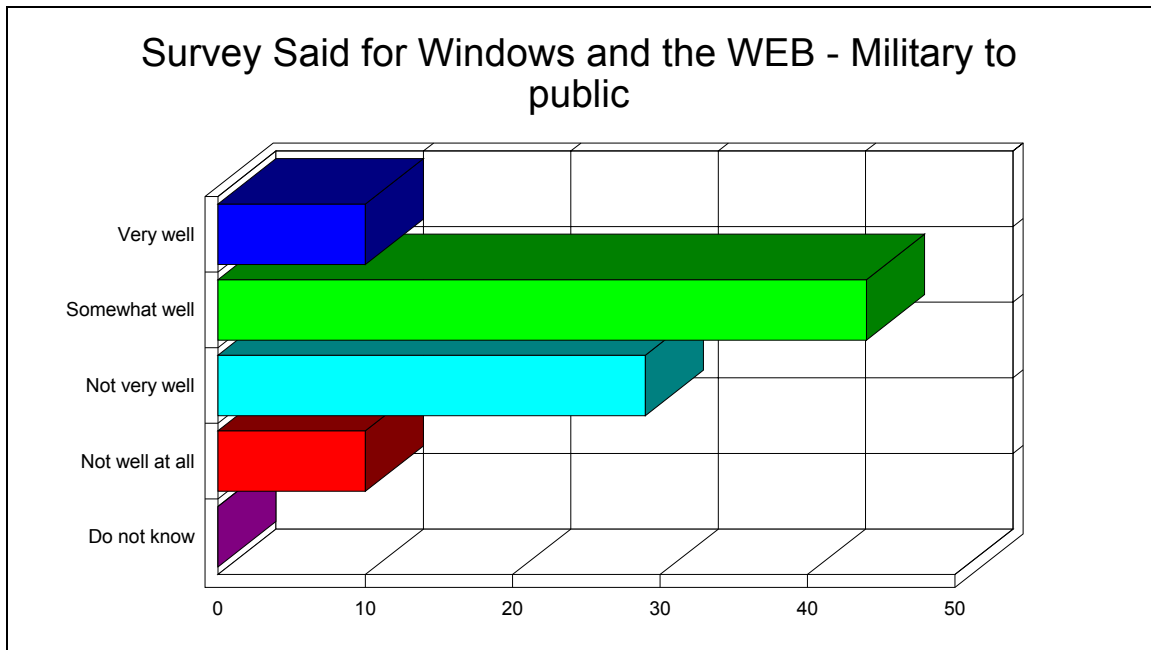
shape the officer's bias perception of politics and military affairs and operations. More importantly, how the media affects their view.

Although the median ages of respondents were about 31 years of age, Figure 4 indicates that a good majority of the respondents were conservative/moderate thinkers. One would assume that officers around the ages of 25-35 process of thinking would be more characteristic of risk-takers. So why the 180° train of thought? From the data, one can infer the conservative/moderate thinking stemming from lack of experience as a Navy officer being commissioned within the past ten years versus their superiors. The “inexperienced” Navy officer obviously would be more conservative in certain situations simply because they've never had any prior exposure – a “better safe than sorry” motto. The fact that the median age of the Navy officers surveyed was 31 years of age indicates that the respondents were still junior in their time of service. Most officers did not have any specific experience in dealing with the media, and if they did it was minimal.

In addition, based on the p-value correlation of the mother's education, one can also infer the conservative/moderate point of view derives from the maternal values being passed on to her offsprings. Mothers are the care-givers, the foundation of the the home, the one who conserves so as to provide for the family, the mediator, etc. Therefore, the Navy officer's conservative approach is maternal – being a provider as team leader of his/her section, sets an example for his/her team members, and supports his/her peers.

Certainly, attitude and education are interrelated; each has a strong effect on each other. But, of the two, attitude is the more important because, without the proper attitude, knowledge will not be applied effectively. The news media fared far less in people's confidence when compared to the military. A large majority of officers would welcome media personnel but there are those who still carry veins of suspicion and distrust that seem to have developed from their past experiences; prior to and including their military service.

Figure 6. Military keeping the public and media informed (see Appendix C- Survey Said™ Statistics and Graphs)



Running a correlation test once again, the p-value infers that there is correlation between the demographic variable of officer commissioning source and what determines their views on how the military tells its story to the media and the people. It may be that because NROTC officers are exposed to a more diversified student population with more varied and liberal educations, particular at the elite college institutions, these Navy officers are exposed to these same liberal views as opposed to their Naval Academy counterparts who are from a more homogenous population.

RESULTS:

Q(5, 17), K-Wallis, Correlation: p-value = 0.0366

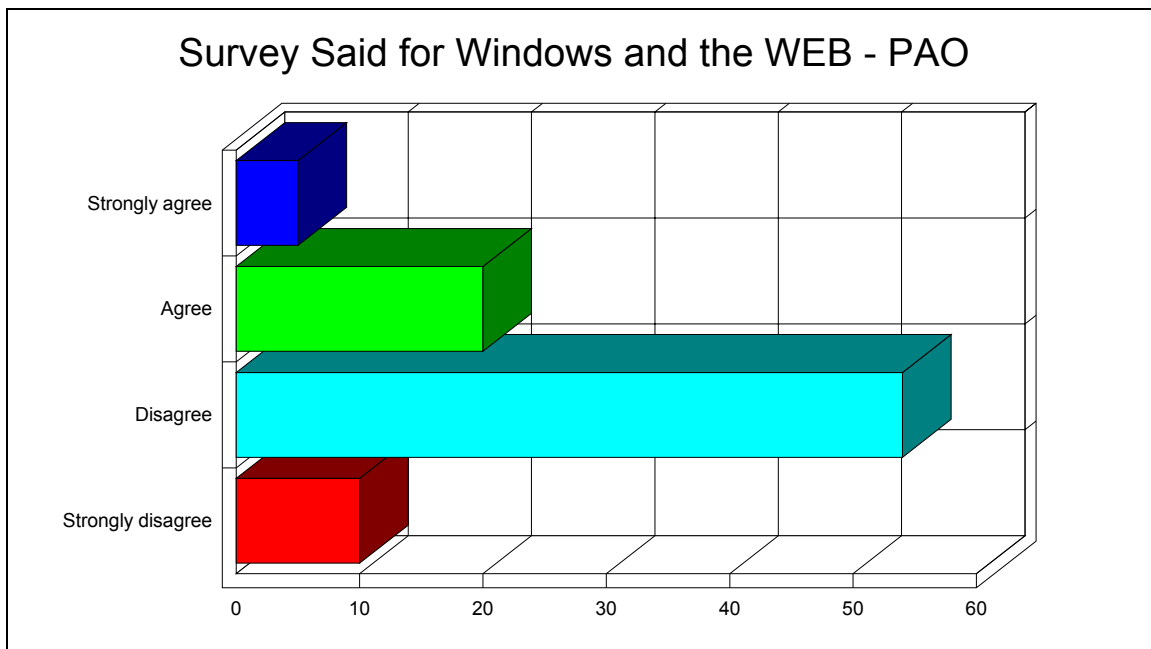
Overall, majority of the Navy officers sampled felt that the military does an adequate job of keeping the media and ultimately the public informed of military and national security issues as shown by Figure 6. But when asked how willing was each Navy officer to share information with the media, the response was just the opposite. There is a significant correlation of the type of job the Navy officers does and their willingness to share information. The data indicate Surface Warfare Officers and Submariners are less willing to share information directly or openly with the media (Navy Aviators did not

respond to the survey). This may be due to the sensitive information that accompanies any tactical/procedural operations either SWO or Submariners are involved in. Because of this and the fact that the Navy officers sampled are still “novices” in their military service and their knowledge, training, and experience in dealing with the media, most would defer in this role of information sharing to the Public Affairs Officer (PAO).

RESULTS:

Q(2, 23), Wilcoxon, Correlation: **(Designator versus value or benefit of sharing information with the media) p-value = 0.0312**

Figure 7. The graph shows that Navy officers disagree with the notion that the PAO encourages officers to speak with the media openly. (see Appendix C- Survey Said™ Statistics and Graphs)



In addition, Navy officers sampled felt an inherent risk when speaking to the media. This is consistent with the conservative/moderate thinking process previously discussed. Listed are the following issues majority of the Navy officers were concern about; each one rated a “4 – very serious risk,”

- Battle plans or operations
- Intelligence issues

These issues rated a “3 – a fairly serious risk,”

- Criticism of current defense or security policies
- Issues which could potentially embarrass a senior officer
- Facts contradicting official statement or policies
- Sensitive issues which are the responsibilities of superiors
- Scandal in the officer’s office or base

It appears that risks and consequences are a big determination of Navy officer’s, attitude towards the news media. The following results demonstrate that the Navy officer is primarily concerned about what is called “operational security.” This is defined as a process of identifying critical information and subsequently analyzing friendly actions attendant to military military operations and other activities to select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation.⁴⁸

The Navy officers sampled felt the consequences of speaking to the media in the following issues rated a “4 – very serious concern,”

- Harming national security

These issues rated a “3 – a fairly serious concern,”

- Embarrassing your service

They are afraid that secrets will be leaked and damage forthcoming activities. They see the media as interested in revealing secrets. This superficial explanation belies the fundamental differences between both the military and the media. This is what shapes the Navy officer’s attitudes towards the media. This misunderstanding of cultures (both the military and the media) influences attitudes and attitudes create some of the tension.

⁴⁸ Joint Pub 3-13: Joint Doctrine for Information Operations, 1998, p. GI-9.

The Navy officer is a team player. The military depends upon team players for operational success. The media are not seen as team players but more of independent entities. The officer respects authority. The journalist is totally undisciplined. The officer is normally a conservative. Most journalists are liberal. The Navy officer is restrained; the journalist is unbridled. The Navy officer, generally speaking, is mute; the scribe is articulate. The Navy officer is practical, and the journalist, particularly today, as opposed to the days of the front-line news of the 1920s and 1930s, is an elitist. He goes to the best colleges; he has advanced degrees; he is no longer the rough- and tumble whiskey-drinking journalist of years past.⁴⁹

These differences lead and influence the young Navy officer to distrust the journalist. However, the military leadership is slowly realizing the importance of manipulating the media to serve the purposes of military operations, such as the use of embedded reporters in Operation Iraqi Freedom (see [Appendix G](#) for SECDEF-CJCS Media guidance).

When questioned why the military thinks the media does not do a good job of reporting and therefore tend to distrust the media, here are their answers. The Navy officers sampled scaled their responses from 1 to 10, with 10 representing the highest importance rating.

- The current news premium is on sound bites- sensationalism vs. depth – “9”

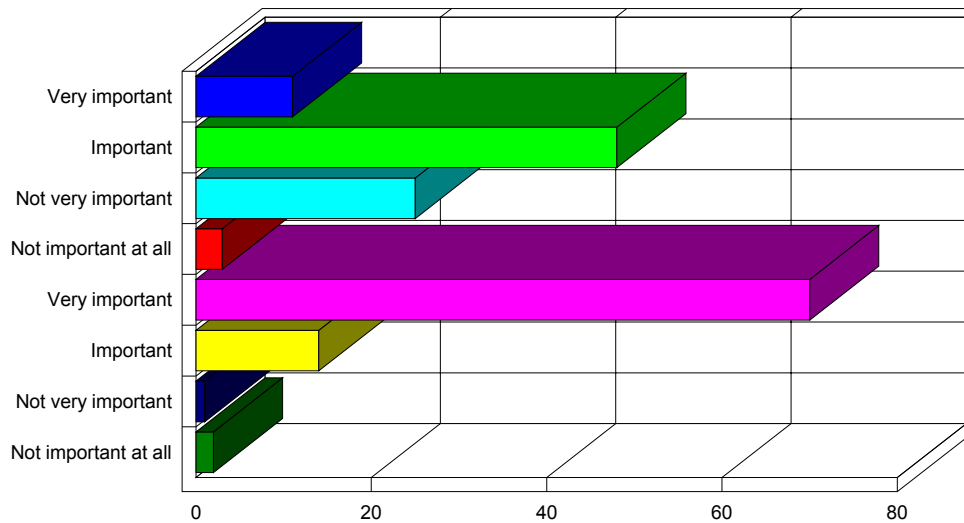
Figure 8. The following describe the considerations media editors and gatekeepers have in selling news. (see Appendix C- Survey Said™ Statistics and Graphs)

| | | | |
|---|----|--------|----------------------|
| Informing the public: | | | |
| 37-1 | 11 | 12.64% | Very important |
| 37-2 | 48 | 55.17% | Important |
| 37-3 | 25 | 28.74% | Not very important |
| 37-4 | 3 | 3.45% | Not important at all |
| Selling more copies or getting better ratings: | | | |
| 37-5 | 70 | 80.46% | Very important |
| 37-6 | 14 | 16.09% | Important |

⁴⁹ Trainor, Bernard E. *Military Perspectives on Humanitarian Intervention and Military-Media Relations*. Chester W. Nimitz Memorial Lectures in National Security Affairs, Departments of Military Education, International and Area Studies, UC Berkeley, 1995. p. 29-30.

37-7 1 1.15% Not very important
 37-8 2 2.30% Not important at all

Survey Said for Windows and the WEB - Selling news



- Lack of personal military experience by reporters or writers - “8”
- Complexity of military information doesn’t fit the new journalism template/format (a 30 sec. format cannot cover all of the complex nuances of military operations) – “7”
- To a lesser extent the following factors rated a “6” –
 - Low level of public interest/apathy
 - The ability to raise the priority of military stories with editors
 - Concern that the military is trying to spin or control the story (therefore, no news might be preferable)

A number of factors have influenced the decline of military experience by reporters or writers. For a decade after the 1991 Persian Gulf War, coverage of the armed forces, defense and intelligence issues and even foreign affairs had steadily dwindled as a result of economic trends and business decisions that forced print and broadcast

operations to slash manpower and costs. Of equal significance, the nation itself had turned away from an interest in foreign and military news after victory in the desert, and the political slogan, “It’s the economy, stupid,” aptly defining journalism priorities in the 1990’s.

Ed Offley criticizes his own kind by saying even journalists have “the habit of thinking that international events have no significance at home has been exposed as just as dangerous as pre-World War II isolationism.” Then September 11 occurred and now reporters and editors and producers are clamoring to cover military events with the intensity and purpose to match that of their predecessors at Normandy in 1944, Inchon in 1950, the Ia Drang Valley, in 1965, and 73 Easting in the Iraqi desert in 1991. For Offley, many journalists today will be rushed into the military beat totally unprepared for wartime coverage. The lack of knowledge and experience of military operations as well as military personnel is a recipe for frustration, bewilderment and error.⁵⁰ This interaction and understanding of military culture is one critical factor to the military trusting the media. At this point in the analysis, there seems to be a correlation between the age of the respondents, their family background, and where/when Navy officers were commissioned to their views on public life, politics, and the media. Majority of Navy officers, like many everyday people, were raised with their parents’ biases whether it is regards to morals, raising a family, education, religious views, or political views. With time (or age and years of military service), Navy officers will gain more experience and will become more knowledgeable in their specialized “jobs”. All these factors combined, each being equally important factors, correlate that each Navy officer have been “shaped” into thinking a particular bias regarding all subjects including the negative bias they have towards the media. Moreover, some of the questions show the median responses of Navy officers towards what they think are the primary agendas of editors and media gatekeepers.

⁵⁰ Offley, Ed. *Pen & Sword, A Journalist’s Guide to Covering the Military*. Oak Park, IL, Marion Street Press, Inc., 2001, p. 14.

2. After deciphering that not one but all these factors affected a Navy officer's bias towards media we asked, "What are the appropriate roles of the U.S. military in the 21st century?"

Survey respondents felt that the following were somewhat appropriate:

- Informing the public about military and national security issues
- Education, training, career opportunities for youth
- Domestic disaster relief

But also respondents felt that these roles for the U.S. in a post-Cold war world were very appropriate:

- Protecting the U.S. from foreign aggressors
- Provide military advice to U.S. political leaders
- Assist in the defense of allies
- Protecting U.S. economic interests abroad

A semantic differential, basically a play on words in the same question to evoke a different response from the officers sampled, was asked of respondents in Q18-20, specifically if they *want*, *need*, and *have a right* to know about the following issues. The following are the top 5:

1. Military readiness
2. Terrorist threats
3. Counter-Terrorist activities
4. Effect on reaching policy goals
5. Quality of life/Human casualties

In order to understand if the military is sensitive to the public's access to timely and accurate information on military matters and national security issues, over half the officers felt that it was very important that the public get timely and accurate information (51.61% surveyed). However, when asked what issues affect the public's awareness of the military, most felt the American public had more important personal issues to worry about and that Americans lack of military service contributed to this lack of awareness.

This is significant because it tells that media is doing a good job of reporting their news stories but the public is not listening.

3. Identify evidence of bias towards the media -

The Navy officers felt the following towards the media:

- Few officers sensed that the media kept the public informed about the military and national security issues (about 7.61%). About 55% felt that the media performed this service not very well or not well at all.
- When asked how the military performs the task of informing the public about military and national security issues, Navy officers felt that the military did somewhat well (about 47.31%)
- The officers sampled felt that several issues impacted their willingness to share information with the media:
 - Concern about impact on current military operations and fear that comments will be taken out of context or misinterpreted

Despite these responses that show a military officer corps showing some bias towards the communications media, most officers in the survey felt that the Navy's relationship with the media was good. In fact officers felt that media personnel should have maximum access to the military in peacetime. It is when military actions are being planned, that the Navy officerNavy officers surveyed felt that the media should have limited or no access. However, if an open and honest relationship between the military and the media were to exist, then the notion of access would not be an issue. General Bernard Trainor mentions that total access was provided to journalists in the Gulf War and that they were very responsible.

The enormous left hook that Schwartzkopf called the Hail Mary involved hundreds of thousands of troops moving into the western desert to surprise Saddam Hussein. Journalists in the theater and every editor and publisher in the United States (whether it was print or television) knew about it. But none of this came out in the press. There was speculation by analysts, but there was no leak that the forces were actually moving to the west. The press showed itself to be quite responsible.⁵¹

⁵¹ Trainor, Bernard E. *Military Perspectives on Humanitarian Intervention and Military-Media Relations*. Chester W. Nimitz Memorial Lectures in National Security Affairs, Departments of Military Education, International and Area Studies, UC Berkeley, 1995. p. 41.

Finally, the officers in this study felt that the “medium” of how news or information is reported has modestly improved the quality of news reporting of military and security issues. This phenomena can be attributed to the fact that people have access to different forms of media, 24-hour news television, the Internet, etc. to corroborate the evidence presented. In fact, some of the officers (about 46%) feel that new technology such as the Internet improves the quality of reporting.

From this survey analysis, utilizing several methods to help determine if bias exists among URL Navy officers, there is evidence of bias towards the news media. A review of the literature and discussions on military-media relationships also confirm that the same issues that surface: work environment, home environment, a misunderstanding of PAO roles, a dichotomy of organizational agendas as the cause of conflict, to name a few, are also contributing root causes towards this bias. To address this bias, the researcher maintains that the vast resources of the Department of the Navy’s training and education can be optimized to help shift the attitudes of Navy officers against the media to a more positive direction.

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IV. CONCLUSION

We did our job, and I think we did it well. I think that remains, for me, the model that should be the goal in military and media relations: honest, open coverage.

--Joe Galloway [war correspondent who covered wars from Vietnam to the Persian Gulf]

A survey was developed for a targeted sample of the URL Navy officers. The data returned were analyzed and evidence compiled showing that there is, in fact, bias among URL officers against the media. Factors such as home environment prime the respondents with a propensity to develop this negative bias. Couple this instilled bias with the inherent bias senior officers may tend to have against journalists, and it is no wonder that subordinates feel the way they do, according to this study. Further, the study reviewed the media training course the Navy offers its senior officers (or any senior military officer that requests the training) as a model from which to adapt similar media training for young Navy officers. And finally, the study presented the training background for career Navy officers from their commissioning throughout their mid-grade service up until they reach the lowest flag rank (O-7).

So why is a study on military-media relationships, especially one that focuses on more junior officers within a closed population, important? First, the career track of the URL officers- from commissioning on is well established. Second, the dynamic environment the military faces calls for a continual re-evaluation of education and training topics and standards. In the grand scheme of things, the news media, whether U.S. naval leaders like it or not, are an integral part of military operations and planning. The media's purpose of informing the American public of the United States policies in world affairs is crucial. More specifically, the media serve a greater purpose in communicating to the American public the U.S. Navy's role in defense of U.S. policies at home as well as abroad. This happens generally within the operational confines of operational planning and warfare such as Command and Control Warfare, Information Operations (C2W, IO). Finally, senior military officers get this valuable training, so why

not grow that skill early within the junior officer specialty training tracks and professional military education opportunities? Instead of a media boot camp late in a Navy officer's career, tailored subsequent courses teaching Navy officers how to develop relationships and deal with the media over the course of their career would have the most benefits. Officers would have the experience coupled with the education to face a dynamic military-media environment.

A. RECOMMENDATIONS FROM SURVEY

With evidence citing probable bias amongst active duty Navy officers, the following is a proposed modification to URL educational career path to mitigate media bias. It is believed that such educational recommendations will improve officer skills in military-media relationships, even better, to elevate the awareness of the value of a positive military-media relationship for military operations. The following from Colin Powell when he was then Chairman of the Joint Chiefs of Staff (CJCS) exemplifies the importance of such a skill for officer leadership.

In a very real sense this is the same for media-military relationships. There is a political edge to just about every decision made and reported. It is how it is reported and the integrity of the reporting. Every career military officer, especially Navy officers should have this skill injected over the life of their service to prepare them to react to any crisis within their commands. A steady strain of give and take within media-military systems will predictably ensure we win the battle and the war should it come to that.⁵²

The pursuit of a more well-rounded and professional naval corps of officers has seen progress made over the years. But until the resistance of senior Navy officers subsides and the championing of a more balanced incentive and reward system for Navy officers occurs, most will continue to strive for that frocking at sea to next level of command rather than seek a spot on the superintendent's academic achievement board. The Navy is attempting to mitigate this with the Five-vector model. The tool is

⁵² Extracts from *THE COMMANDERS* by Bob Woodward. Reprinted by permission from The Commanders, by Bob Woodward, pp. 82-196 © 1991 by Bob Woodward. Published by Simon & Schuster. Ch 13, p. 115.

essentially a front-end program that taps into a personnel's training and education database to effectively manage and customize a roadmap for successful development of a sailor's career along five vectors: professional development, certification and qualification, personal development, leadership, and performance. The Navy hopes to use the five-vector model as a basis for changing the ways sailors advance and in the future how they are paid. By doing this it is hoped that the navy can overhaul its human resource management problems of the past.⁵³

If this is the case, that education over a Navy officer's career is important, then what are the factors that hinder an important and practical change to officer career paths? One hindrance is the performance rating system currently in place. Simply put graduate education does not receive high marks on a Navy officer's fitness report. Sustained performance at sea is the gold standard if an URL officer expects to advance in their career. Centers of excellence such as the Naval Postgraduate School and the Naval War College are not sought after career milestones. This has to change if there is to be an alignment of educational goals and skills required of future Navy officers with how they rated on the basis of their academic achievements; currently this is not the case.

Education as a catalyst for change has been the tool through which societies have sought to fight traditional bias – such as racial, ethnic, and social prejudice. The advocates of education have always believed that there are many lifelong benefits, such as increased tolerance, understanding, and patience, many of which help overcome cultural stereotyping, bias, and insensitivity.⁵⁴ Education has been shown to improve self-esteem and hone creativity not to mention the boost in critical thinking skills of its subjects. At-risk children who have participated in music education, for example have shown productivity increases in academic performance. Moreover there seems to be a greater tolerance for diversity among those who have been exposed to this unique form of education versus those that were not. Therefore, this is evidence that education, even in innovative programs, is a very successful tool in mitigating bias of varying types. Navy

⁵³ Faram, Mark. "Five-Vector plan is your road map to advancement," Navytimes.com, 29 May 2003.

⁵⁴ Glenn, Karl. "The Many Benefits Of Music Education -- Now and in the Future." *NASSP Bulletin* v.76, n.544 (May 1992): p. 1-4.

officers exposed to any structured media education course at any point in their career, but most especially during their formative junior officer tours, will no doubt develop and hone the skills and experience that will only benefit military-media relationships.

One proposal was to send officers to War College before rather than after mid-level command. Capstone and other general/flag programs help officers gain a global perspective, but they come late in a career and there are no mandatory subsequent courses for strategic leaders.⁵⁵ Perhaps an institutional education process between assignments is unnecessary on the strategic level.

Leader conferences and other interactions already provide those benefits to senior officers. The question is whether there is sufficient time or opportunity on the job for strategic leader discussion, reflection, integration, and synthesis of concepts. One source of help is experienced senior officers. Many retired strategic leaders are involved in professional military education. One possibility is an institutional setting where retirees can periodically exchange information with active duty general/flag officers in a nonoperational environment. This same type of mentoring can also be applied throughout a junior officer's career, especially when issues arise that concern military-media relationships.

The services, specifically the Navy, should explore how information technology can enable and enhance these mentor relationships. Other respondent suggestions included taking advantage of graduate education at civilian institutions in international affairs, exposing leaders to the dynamics of civil-military relations and congressional affairs, establishing partnerships with industry, and spending more time with senior leaders in other services. Such initiatives could be accomplished within the context of a more robust institutional development program. Whether that future is taking the reigns of a new job as a newly promoted Rear Admiral, or if that future calls for an alliance of

⁵⁵ The Capstone Course is hosted by the National Defense University for newly selected flag/general officers. The curriculum examines major issues affecting national security decision-making, military strategy, joint/combined doctrine, interoperability, and key allied nation issues. Capstone is an intensive six-week course consisting of seminars, case studies, informal discussions, visits to key US military commands within the continental United States, and overseas trips to Europe, the Pacific, and the Western Hemisphere.

two great organizations working together to get the message to the world that the United States will not be intimidated by terrorists. Planning for future readiness is key.

In addition to a media course curricula modeled after the senior officer media training outlined in Appendix E, there are other opportunities to raise the level of awareness for Navy officers. For instance during the course of this research, the author came across a proposed model from which military officers can use to determine when an imbalance in the military-media process will occur, a sort of military-media relationship modeling concept. The model is theoretical in nature but it serves the purpose of allowing military officers to examine past, present, and future conflicts with the military-media and the American public in mind. For the sake of clarity, the following description of the model as well as an example of its application is directly quoted from Thomas J. Burton's research.

A more plausible model, that takes into full account the influence of media and the complexity of today's environment, is one of three-dimensions. First, there is a long and narrow flat surface. This surface acts as an arbitrary plane designed to support the model as it moves with the passage of time. Second, a hollow, three-sided pyramid with flexible walls sits on the plane. The pyramid is symbolic of the Trinity. One side represents the people, the second side the military, and the third, the government. Superimposed over the pyramid is a pliant, water-filled cube. Each top corner of the tube represents a form of media (print, film, radio, and television) with the five exposed sides (one being the top) representative of their individual or collective influence. If only one form of media is exerting pressure, only one side of the cube will flex toward the pyramid. If two forms of media exert pressure, two sides of the cube will flex toward the pyramid. The same pattern holds true for three media. If, however, all media exert pressure, all five sides of the cube will flex toward the pyramid and the pyramid will be subject to total collapse. The plane of time provides a solid foundation, or base, for both the air-filled pyramid and water-filled cube.

Burton further amplifies his theoretical model by providing the following example.

Applying the model to Operations Other Than War (OOTW) gives us the opportunity to see the model in action. The most commonly recognized forms of OOTW are U.S. military support to United Nations peacekeeping and peace enforcement efforts. However, OOTW activities also include strikes and raids, support to insurgency, antiterrorist operations,

counterdrug operations, humanitarian relief, and the evacuation of U.S. citizens from hostile environments.

OOTW represents a gray area. The people, the government, the military, and the media are often uncertain about why the United States should be involved. Frequently, these activities do not represent a direct or immediate threat to the well-being of America. Amidst this uncertainty model is subject to a bombardment of vacillating changes among the three elements of the pyramid and the gatekeeping operations of the media.⁵⁶

However, education, training, and experience does not stop with military officers, it also must be embraced by the news media as well. For the military and the media, both worlds are changing, so adapting and learning are two traits that will serve each entity well. The challenges go beyond the immediate deployment of combat forces against our enemies. The following are additional variables the military and news media face with regards to their own organizational conflicts:

- A possible “defense train wreck” stemming from serious under-funding of defense assets in the late 1980s through 2000;
- The emergence of hackers and cyber terrorists attempting to damage or destroy military and civilian computer networks;
- Protracted ethnic conflicts in the Balkans, former Soviet Union, Middle East, Africa and Asia that have the potential to escalate into regional wars;
- The collapse of nonproliferation regimes worldwide and increased threat of nuclear war in South Asia (even more dangerous than before September 11);
- The increasing number of “rogue” states that are arming themselves with ballistic missiles.

The point here is that organizational agendas for the military and the media are different. If the military see one way of how the military message should be reported versus how it is being reported by the news media, a problem will arise.

The study sought to determine if there was a correlation of when Navy officers were commissioned (i.e., their time in service) and their opinion on what they needed to know about military issues and operations. The test found that terrorist threats were the most important issue compared with military readiness which had a weaker correlation.

⁵⁶ Burton, Thomas J., Mr. *Mass Media and Clausewitz: A Different Look at the Trinity*. U.S. Army War College. Individual Study Project, 1994. p. 23.

According to Table 4, respondents saw that these issues to some extent influenced their mission determinations and objectives. This significance of this correlation is important because these very issues are what the media are still lacking in accurately reporting to the public, which result in mistrust by the military during certain circumstances. Hence, it would benefit the military if this message were effectively understood and communicated to the American public.

RESULTS:

Q(4, 19) –Column 46(YR Commission vs. Military Readiness, p-value = 0.067)

Weak Correlation; Column 52(YR Commission vs. Terrorist Threats, p-value = 0.0384) Correlation

Table 4. Respondents answers on their need to know about specific military issues and operations (see Appendix C- Survey Said™ Statistics and Graphs)

| | | | |
|---------------------------------------|----|--------|---------------------------------|
| 92 Respondents Answered Question # 19 | | | |
| Issues | | | |
| 19-1 | 77 | 83.70% | Terrorist threats |
| 19-2 | 51 | 55.43% | Counter-terrorist activities |
| 19-3 | 78 | 84.78% | Military readiness |
| 19-4 | 58 | 63.04% | Effect on reaching policy goals |
| 19-5 | 42 | 45.65% | Physical damage |
| 19-6 | 43 | 46.74% | Human casualties |
| 19-7 | 47 | 51.09% | Quality of life |
| 19-8 | 15 | 16.30% | Sexual misconduct |
| | 1 | 1.08% | Missing Cases |

Not only will the military engage future enemies under these circumstances, they must also engage the media in order to best present the message of their mission in planning for these variables when considering future operations. For the news media, the challenge is to report accurately the facts as they present themselves but how to do this with shrinking budgets and reporters who lack general military experience.

For print and broadcast journalism, the defense beat remains a vital segment of government and society that demands professional, comprehensive coverage.⁵⁷ Just like the Joint Professional Military Education (JPME) program hosted at the Naval War

⁵⁷ Offley, Ed. *Pen & Sword, A Journalist's Guide to Covering the Military*. Oak Park, IL, Marion Street Press, Inc., 2001. p. 264-265.

College, is a result of crisis, new challenges requires adaptation in Navy officer and news media education and training.

Case studies are a wonderful application to not only use Burton's model described above, but also as an instructive opportunity to combine theory and experience. For the military-media relationship, it should be standard practice following each crisis/conflict operation, that leaders from the Pentagon and from news organizations arrange a thorough, objective "lessons learned" analysis of the news media coverage and the way it was accomplished. Another recommendation would be to insure the Professional Military Education System (PME) adequately prepares military officers to assist the news media in their vital role of informing the American public on the activities of the U.S. armed forces, with specific emphasis on the crisis/conflict situation.⁵⁸

A Commanding Officer at Sea seeks to win every battle at sea. It is through education that innovativeness is inspired. How beneficial would it be that in addition to the specific agendas each member of the trilateral relationship (military, people/government, and media) pursues, that a blend of core values is fostered. In lieu of the self-interests, vanity and personal ambition that scars meaningful military-media relationships, institutional trust and understanding can flourish. Ultimately this understanding will lead to the realization that both the media and the military are upholding the freedoms that make democracy work in the United States.

B. AREAS FOR FURTHER RESEARCH

Despite these differences, the media and the military co-exist and have had a long-standing relationship. The media have been instrumental in educating the public about the military and keeping them abreast of the role of the military in the realm of world politics and the furthering of American interests abroad. However, the media are not being utilized to the fullest benefit by the military.

One of the questions this study sought to examine involved the root cause of bias the research presupposed that U.S. Navy officers had against the news media. One area

⁵⁸ Aukofer, Frank and William P. Lawrence. *America's Team; The Odd Couple—A Report on the Relationship Between the Media and the Military*. The Freedom Forum First Amendment Center: Nashville, TN, 1995, p. 53.

to focus on for further study are those that showed the most relevance to this initial question – what are the factors that produce bias amongst Navy officers? The data in the study indicate a possible correlation between commissioning source and level of media bias; this should be a focus of future research. There seems to be a perception found in this study that the military does a good job of conveying its message to the public. The public however, may be indifferent to the message as it is being presented. A further study could be issued to investigate why, and what tools or skills could be learned to better involve the public towards receiving the message more positively. It is recommended that subsequent research narrow in on the factors of bias uncovered by this small study.

In summary, junior Navy officers' education, whether it is derived from their parents, from informal training (hands on experience), primary schooling, or during their military career, influenced some bias throughout their entire lives. It is from this early "education" that intelligent Navy officers shape their way of critical thinking which involves their perception of the media –good or bad. Looking towards the Navy's future, the military must support a continuing military-media education program to guarantee continued success of military forces.

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APPENDIX A - INSTITUTIONAL REVIEW BOARD PACKAGE

NAVAL POSTGRADUATE SCHOOL INSTITUTIONAL REVIEW BOARD ROUTE SHEET

Ref:

Date:

IRB Committee Member,

You have been selected as an expedited reviewer for the enclosed protocol. If the protocol meets IRB requirements and is not greater than minimal risk, please sign the enclosed approval memorandum for the experimental protocol you have reviewed and return to the Chair when completed. Please review this as soon as possible. We'd like to have protocols reviewed within one week of processing. If this protocol exceeds minimal risk, disapprove and please notify the IRB Chair immediately.

Thank you.

| REVIEWER NAME/TITLE/CONTACT INFO | INITIAL HERE |
|----------------------------------|-----------------|
| | |



NAVAL
POSTGRADUATE
SCHOOL

NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA

TO: Steven J. Iatrou

FROM: Jeff Crowson, Chair, NPS Institutional Review Board for the Protection of Human Subjects

DATE: December 10, 2003

SUBJ: APPROVAL OF EXPERIMENTAL PROTOCOL

1. Your protocol entitled "Military-Media Bias Online Survey" has been approved by the NPS Institutional Review Board.
2. You may begin your experiment under the guidelines outlined in your protocol.
3. This approval will remain active for one year from the above date. However, if there are any changes made to your approved protocol over the duration of your data collection, it will be necessary to reapply to the NPS IRB for approval.
4. At the conclusion of data collection, you agree to present a project summary to the NPS IRB which will remain on permanent record.

Reviewer's Name and Title

Jeff Crowson
IRB Chair

NPS Approving Official



NAVAL
POSTGRADUATE
SCHOOL

INFORMATION SCIENCES ACADEMIC GROUP
Root Hall
Naval Postgraduate School
Monterey, California 93943

Tel: 831-656-4660
DSN: 878-4660
sjiatrou@nps.navy.mil

To: Protection of Human Subjects Committee

Subject: **Application for Human Subjects Review for Media-Military Relationship Online Survey**

1. Attached is a list of questions to be administered in an online survey during the months of August through September 2003.
2. We are requesting approval of the described experimental protocol.
3. We include the consent forms and privacy act statements that will be part of the navigation process to the URL at which the survey is being hosted.
4. Once a participant completes the survey, no debrief will be given. Final results will be tabulated and analyzed and incorporated into a thesis project exploring the inherent bias towards the media in the military.

S. J. Iatrou

| | | |
|--|---|------------------------------------|
| APPLICATION FOR HUMAN SUBJECTS REVIEW (HSR) | | HSR NUMBER <i>(to be assigned)</i> |
| PRINCIPAL INVESTIGATOR(S) <i>(Full Name, Code, Telephone)</i> Steven J. Iatrou, Code 37/39, 1-831-656-3770 | | |
| APPROVAL REQUESTED <input checked="" type="checkbox"/> New <input type="checkbox"/> Renewal | | |
| LEVEL OF RISK <input type="checkbox"/> Exempt <input type="checkbox"/> Minimal <input checked="" type="checkbox"/> More than Minimal Justification: Study only involves completion of online-survey. | | |
| WORK WILL BE DONE IN (Site/Bldg/Rm) NPS, Root Hall, 201I | ESTIMATED NUMBER OF DAYS TO COMPLETE 28 Days | |
| MAXIMUM NUMBER OF SUBJECTS 27,000 | ESTIMATED LENGTH OF EACH SUBJECT'S PARTICIPATION 30 Minutes | |
| SPECIAL POPULATIONS THAT WILL BE USED AS SUBJECTS <input type="checkbox"/> Subordinates <input type="checkbox"/> Minors <input type="checkbox"/> NPS Students <input type="checkbox"/> Special Needs (e.g. Pregnant women) <input checked="" type="checkbox"/> Unrestricted Line Officers Specify safeguards to avoid undue influence and protect subject's rights: Survey Said™ software is anonymous. Only demographic data will be used to annotate data. | | |
| OUTSIDE COOPERATING INVESTIGATORS AND AGENCIES N/A <input type="checkbox"/> A copy of the cooperating institution's HSR decision is attached. | | |
| TITLE OF EXPERIMENT AND DESCRIPTION OF RESEARCH (attach additional sheet if needed). <i>Military-Media Relationship Online Survey. Survey will attempt to identify a bias towards media by military officers and discern if there is a specific time in an officer's career when he/she becomes biased against the media.</i> | | |
| I have read and understand NPS Notice on the Protection of Human Subjects. If there are any changes in any of the above information or any changes to the attached Protocol, Consent Form, or Debriefing Statement, I will suspend the experiment until I obtain new Committee approval. SIGNATURE _____ DATE _____ | | |

PARTICIPANT CONSENT FORM

You are invited to participate in an online survey studying the military and the media. We ask you to read the following paragraphs and press the “Participate in Survey” button below indicating that you agree to be in the study. Please direct any questions you may have to Steven J. Iatrou, sjiatrou@nps.navy.mil.

If you agree to participate in this study, you will be asked to answer a series of questions that are aimed at assessing the relationship between the military and the media amongst the Navy’s unrestricted line Officer Corps. The first 13 questions are for collecting demographic information and will aid in the identification of statistical trends, while the remaining questions address the military-media relationship.

Privacy Act Statement. Data collected from this survey will be used for statistical analysis by the Principal Investigator, Departments of the Navy and Defense, and other U.S. Government agencies, provided this use is compatible with the purpose for which the information was collected. Use of the information may be granted to legitimate non-government agencies or individuals by the Naval Postgraduate School in accordance with the provisions of the Freedom of Information Act.

1. **Risks.** This research involves virtually no risk at all.
2. **Compensation.** No tangible reward will be given. Results will be available in a completed thesis project titled, “*Military-Media Relationships: U.S. Navy officers’ Attitudes Towards the Media.*”
3. **Confidentiality.** No information will be gathered which could identify you as a participant.
4. **Voluntary Nature of the Study.** If you agree to participate, you are free to withdraw from the study at any time without prejudice.
5. **Minimal Risk Consent Statement.** I understand that this project does not involve more than minimal risk.
6. **Voluntary Participation.** I understand that my participation in this project is voluntary and refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. I also understand that I may discontinue participation at any time without penalty or loss of benefits to which I am otherwise entitled.
7. **Statement of Consent.** I have read the above information. I agree to participate in this study. I understand that this project does not involve more than minimal risk. I have been informed of any reasonably foreseeable risks or discomforts to me.

Participate in Survey

Decline Participation

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APPENDIX B - MILITARY MEDIA RELATIONSHIP SURVEY QUESTIONS

Questions 1-13 are designed to provide demographic identifiers to the survey data and enable collected data to be correlated to specific age, rank, commissioning source, career field, or gender.

1. What is your rank?

- ☐ ENS
- ☐ LTJG
- ☐ LT
- ☐ LCDR
- ☐ CDR
- ☐ CAPT
- ☐ RDML
- ☐ RADM
- ☐ VADM
- ☐ ADM

2. What is your primary specialty?

- ☐ Aviator
- ☐ Submariner
- ☐ Surface Warfare Officer

3. In what year were you born (YYYY format)?

4. In what year were you commissioned (YYYY format)?

5. What is your commissioning source?

- ☐ OCS
- ☐ ROTC
- ☐ USNA
- ☐ Enlisted Commissioning Program
- ☐ Seaman to Admiral
- ☐ Other

6. What is your sex?

- ☐ Male
- ☐ Female

7. What is the highest level of education that you have received?

- ☐ high school
- ☐ some college
- ☐ college graduate
- ☐ some graduate work

- o graduate degree

8. How would you describe your views on political matters?

- o far left
- o very liberal
- o somewhat liberal
- o moderate
- o somewhat conservative
- o very conservative
- o far right
- o other
- o no opinion

9. Generally speaking, do you think of yourself as a Republican, a Democrat, and Independent, or what?

- o Republican
- o Democrat
- o Independent
- o no preference
- o other

10. What is the highest level of education that your father obtained?

- o less than high school
- o high school
- o some college
- o college graduate
- o some graduate work
- o graduate degree

11. What is the highest level of education that your mother obtained?

- o less than high school
- o high school
- o some college
- o college graduate
- o some graduate work
- o graduate degree

12. Where did you live most of the time when you were growing up?

- o New England
- o South
- o Mountain States
- o Pacific Coast
- o Mid-Atlantic
- o Midwest
- o Southwest
- o moved around

- o other (please specify)

13. What is your racial/ethnic identity?

- o White or Caucasian, not Hispanic
- o Hispanic
- o Asian-American
- o Black or African-American, not Hispanic
- o American Indian, Eskimo, or Aleut
- o other (please specify)

Questions 14-39 are designed to identify an officer's feelings towards the role of the military in the post—Cold War world and to identify bias towards the media.

14. Which of the following do you feel are appropriate roles for the United States military to play in contemporary American society. Choose among 4, “very appropriate,” 3, “somewhat appropriate,” 2, “somewhat inappropriate,” and 1, “very inappropriate.”

- o Informing the public about military/national security issues
- o Education, training, career opportunities for youth
- o Domestic disaster relief
- o Model for resolution of social problems
- o Enforcement of immigration policies
- o Domestic law enforcement

15. Which of the following do you feel are appropriate roles for the United States military to play in the post-Cold War world. Choose among 4, “very appropriate,” 3, “somewhat appropriate,” 2, “somewhat inappropriate,” and 1, “very inappropriate.”

- o Protect the U.S. from foreign aggressors
- o Provide military advice to U.S. political leaders
- o Assist in the defense of allies
- o Assist emerging democracies with professionalization and de-politicization of their militaries
- o Protect U.S. economic interests abroad
- o Participate in multinational peacekeeping efforts
- o Support humanitarian relief efforts
- o Intervene in civil wars when it is deemed in the U.S. national interest
- o Support and participate in foreign counter-narcotics activities

16. How well do you think the media keep the public informed about military and national security issues?

- o Very well
- o Somewhat well
- o Not very well
- o Not well at all
- o Don't know

17. How well do you think the military fulfills its responsibility to keep the public informed about military and national security issues?

- ☐ Very well
- ☐ Somewhat well
- ☐ Not very well
- ☐ Not well at all
- ☐ Don't know

18. Do you *want* to know about the following issues?

- ☐ Terrorist threats
- ☐ Counter-terrorist activities
- ☐ Military readiness
- ☐ Effect on reaching policy goals
- ☐ Physical damage
- ☐ Human casualties
- ☐ Quality of life
- ☐ Sexual misconduct

19. Do you feel that you *need* to know about the following issues?

- ☐ Terrorist threats
- ☐ Counter-terrorist activities
- ☐ Military readiness
- ☐ Effect on reaching policy goals
- ☐ Physical damage
- ☐ Human casualties
- ☐ Quality of life
- ☐ Sexual misconduct

20. Do you feel that you *have a right* to know about the following issues?

- ☐ Terrorist threats
- ☐ Counter-terrorist activities
- ☐ Military readiness
- ☐ Effect on reaching policy goals
- ☐ Physical damage
- ☐ Human casualties
- ☐ Quality of life
- ☐ Sexual misconduct

21. How important do you feel it is for members of the public to receive accurate and timely information on military and national security issues and events?

- ☐ Very important
- ☐ Somewhat important
- ☐ Not very important
- ☐ Not important at all
- ☐ Don't know

22. On a scale of 1 to 10, with 10 being representing the highest importance rating, rate the importance of the following issues affecting the public's awareness of the military.

- o No current military threats to the United States
- o Regional conflicts are far away and too difficult to understand
- o There are more important personal issues to worry about (economy, education, school violence)
- o Declining share of Americans have served in the military (lack of personal experience)
- o Elimination of the draft
- o Technowar: Battles are being fought with technology, with very few if any U.S. casualties
- o Too much on the American plate (lack of time to give the military serious consideration)
- o Our current set of role models and heroes are not from the military (all sports and entertainment)
- o Because it's about where they want to be (medium level of interest, therefore medium level of awareness)
- o Perceived change in mission of the military from U.S. defense to global peacekeeper
- o U.S. is entertainment oriented society; military events are not entertainment
- o The post-Cold-War message (we won!)
- o Changes in the media (cutbacks in funding, number of reporters, etc.)
- o Lack of serious intellectual debate or challenge coming from the media (not as much investigative reporting, detail)
- o Sense that the public feels powerless/disconnected in general (high level of apathy)
- o Impact of negative news stories about the military (sexual misconduct and scandals)

23. On a scale of 1 to 10, with 10 being representing the highest importance rating, rate the importance of the following issues that (would) affect your willingness to share information with the media.

- o Concern about impact on current military operations
- o Lack of general trust in the media by members of the military
- o Fear that comments will be taken out of context and misinterpreted
- o Impact on personal careers (advancement or otherwise)
- o The "good news" offered won't be published
- o A sense that the story has already been written—media are just looking for a footnote or a source
- o A sense that the media don't truly respect or understand the military's complexity and culture
- o Lead by example (senior officers not going forward on key issues; therefore, junior officers continue with this style)
- o Informal mentoring: People who have been burned in the past pass this lesson on to new members of the military
- o Personal experience of being burned (I've been burned once, I won't get burned again)

- o Civilian leadership not being visible or encouraging to media access
- o Potential for negative impact on congressional funding efforts
- o Not comfortable with the skill levels to deliver the information and respond to the kinds of questions asked
- o Impact on future programs if information in the media precedes procurement
- o No personal benefit or value
- o A level of arrogance that the military “owns” the data

24. In general, how would you assess the Navy’s relationship with the media? Choose among 4, “excellent,” 3, “good,” 2, “fair,” and 1, “poor.”

25. Should the media have *maximum* access to the military:

- o In peacetime?
- o During military conflict?
- o When military action is being planned?

26. Public affairs *encourages* military officers to speak with reporters:

- o Strongly agree
- o Agree
- o Disagree
- o Strongly disagree

27. Public affairs tends to restrict media access to information:

- o Strongly agree
- o Agree
- o Disagree
- o Strongly disagree

28. Public affairs tends to follow the orders and desires of senior civilian and military leadership in deciding how to approach setting levels of access:

- o Strongly agree
- o Agree
- o Disagree
- o Strongly disagree

29. How would you rate the relative risk of speaking with the media in regards to the following issues. Choose among 4, “a very serious risk,” 3, “a fairly serious risk,” 2, “not a very serious risk,” and 1, “not a risk at all.”

- o Battle plans or operations
- o Intelligence issues
- o Criticism of current defense or security policies
- o Issues which could embarrass a senior officer
- o Facts contradicting official statement or policies
- o Issues which are the responsibility of superiors

- o Scandal in the officer's office or base
- o Sensitive social issues
- o Public policy relating to the military
- o Capabilities of declassified weapons and technology
- o Personnel issues
- o Quality of life issues
- o Basic and advanced training techniques

30. In speaking with the media, how constrained do you/officers feel due to the influence of: (Choose among 4, "a great deal," 3, "a fair amount," 2, "not very much," and 1, "not at all.")

- o Civilian leaders
- o Superior officers
- o Public affairs officers
- o Peers

31. Rate the following consequences that concern you most when speaking with reporters: (Choose among 4, "a very serious concern," 3, "a fairly serious concern," 2, "not a very serious concern," and 1, "not a concern at all.")

- o Harming national security
- o Embarrassing your service
- o Putting your career at risk
- o Hurting your chances for promotion
- o Hurting your standing with colleagues

32. On a scale of 1 to 10, with 10 being representing the highest importance rating, rate the importance of the following factors that you view are affecting the media's ability to inform the public.

- o The current news premium is on sound bites—sensationalism vs. depth
- o The ability to raise the priority of military stories with editors
- o Complexity of military information doesn't fit the new journalism template/format
- o The level of budget and resource cuts experienced by the media in coverage resources for military news and events
- o Lack of general access to military personnel
- o Lack of patience by media to give military time to prepare and analyze
- o Low level of public interest/apathy
- o Too much focus on issues and officers in the Beltway; not enough human-interest stories of personal relevance
- o Challenging for the media to assess public interest in a specific regional conflict
- o Concern that the military is trying to spin or control the story (therefore, no news might be preferable)
- o Lack of personal military experience by reporters or writers
- o Lack of consistent skills by the military to deliver the information
- o Public's concern about media accountability in general
- o Military news doesn't sell newspapers

33. Prior to September 11th, 2001, how do you think the end of the Cold War has influenced:

The assignment of reporters to cover military and security issues?

- ☐ More reporters assigned
- ☐ Same number assigned
- ☐ Fewer assigned

The level of experience reporters have when covering military and security issues?

- ☐ More experienced
- ☐ About the same
- ☐ Less experienced

34. Since September 11th, how do you think the United States' War on Terror has influenced:

The assignment of reporters to cover military and security issues?

- ☐ More reporters assigned
- ☐ Same number assigned
- ☐ Fewer assigned

The level of experience reporters have when covering military and security issues?

- ☐ More experienced
- ☐ About the same
- ☐ Less experienced

35. When a reporter wants to do a story on the military or a national security issue, it must be approved by an editor or other gatekeeper. What effect do you think editors and gatekeepers have on how fairly and accurately stories get reported?

- ☐ More fair/accurate
- ☐ Just as fair/accurate
- ☐ Less fair/accurate

36. Do editors and gatekeepers or individual reporters have a greater role in determining which military and national security issues get reported in the media?

- ☐ Editors and gatekeepers
- ☐ Reporters

37. How important are the following considerations to editors and gatekeepers?

Informing the public:

- ☐ Very important
- ☐ Important
- ☐ Not very important
- ☐ Not important at all

Selling more copies or getting better ratings:

- ☐ Very important
- ☐ Important
- ☐ Not very important

- o Not important at all

38. How has the rise of the 24-hour news television channels and increased competition influenced the quality of news reporting of military and security issues?

- o Greatly improved
- o Modestly improved
- o Modestly worsened
- o Greatly worsened

39. How does the Internet affect the quality of reporting on military and national security issues?

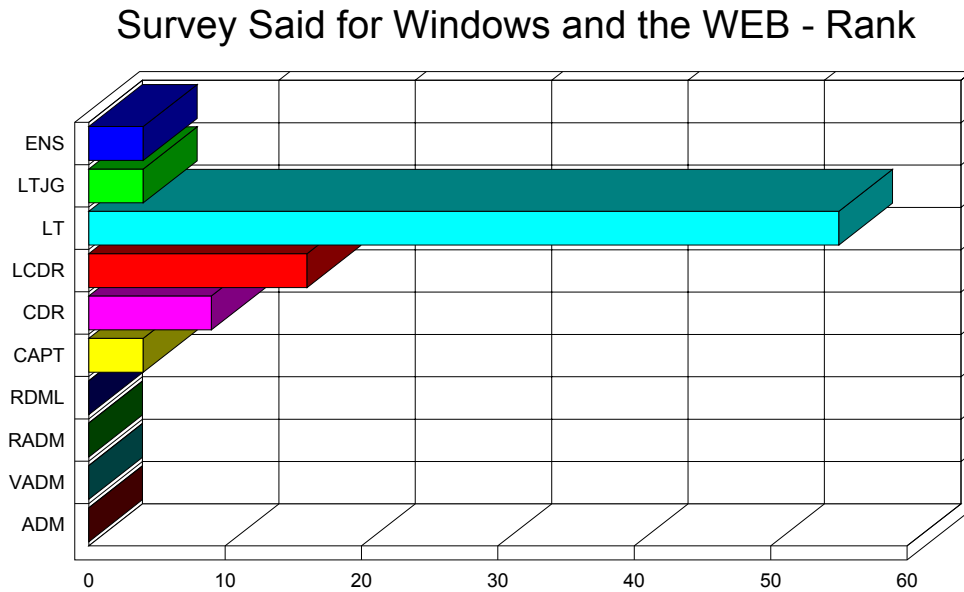
- o Improves
- o Stays the same
- o Worsens

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APPENDIX C - SURVEY SAID™ STATISTICS AND GRAPHS

(Questions 1-13 are designed to provide demographic identifiers to the survey data and enable collected data to be correlated to specific age, rank, commissioning source, career field, or gender.)

1. What is your rank?



93 Eligible Respondents

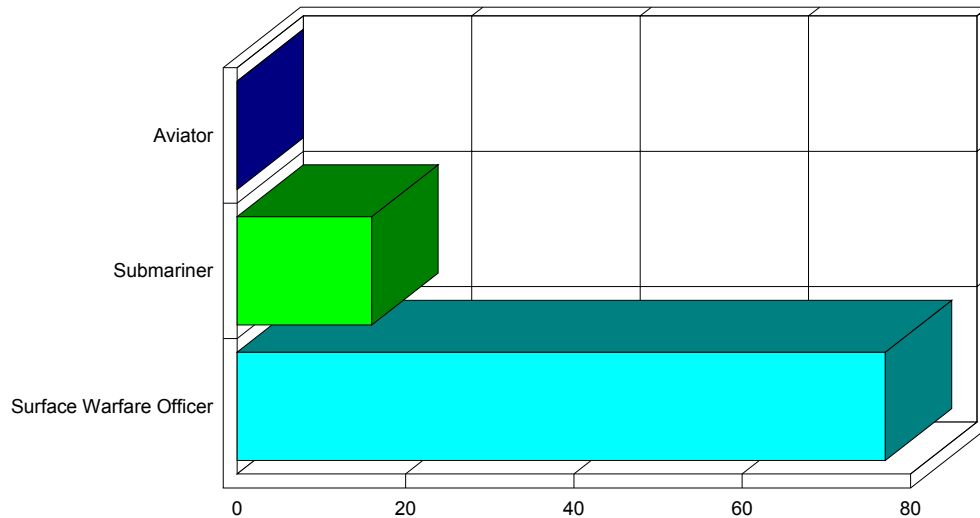
92 Respondents Answered Question # 1

Rank

| | | | |
|------|----|--------|---------------|
| 1-1 | 4 | 4.35% | ENS |
| 1-2 | 4 | 4.35% | LTJG |
| 1-3 | 55 | 59.78% | LT |
| 1-4 | 16 | 17.39% | LCDR |
| 1-5 | 9 | 9.78% | CDR |
| 1-6 | 4 | 4.35% | CAPT |
| 1-7 | 0 | 0.00% | RDML |
| 1-8 | 0 | 0.00% | RADM |
| 1-9 | 0 | 0.00% | VADM |
| 1-10 | 0 | 0.00% | ADM |
| 1 | 1 | 1.08% | Missing Cases |

2. What is your primary specialty?

Survey Said for Windows and the WEB - Specialty



93 Respondents Answered Question # 2

Specialty

2-1 0 0.00% Aviator⁵⁹
2-2 16 17.20% Submariner
2-3 77 82.80% Surface Warfare Officer
0 0.00% Missing Cases

3. In what year were you born (YYYY format)?

92 Respondents Answered Question #3

Average Age was: 1970.2717, about 33 years old

Median Age was: 1972, about 31 years old

4. In what year were you commissioned (YYYY format)?

93 Respondents Answered Question #3

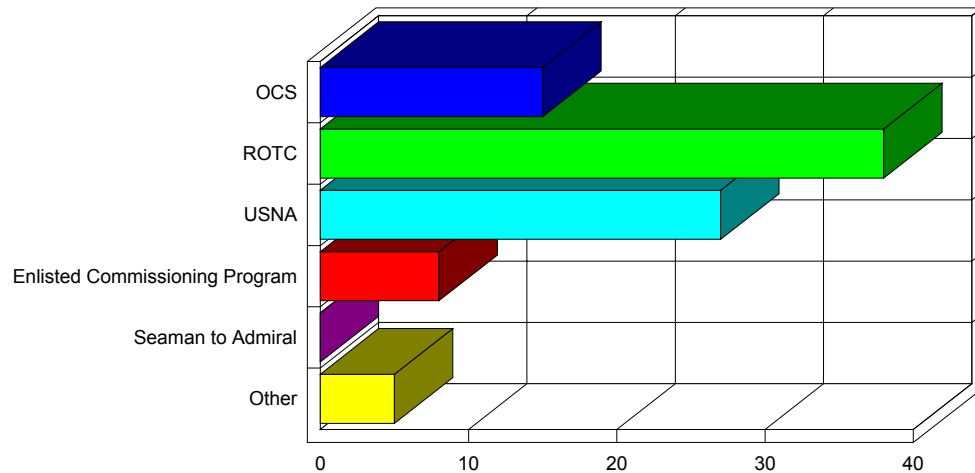
Average commissioning year was: 1993. 054, about 10 years of Naval service.

Median commissioning year was: 1996, about 7 years of Naval service

⁵⁹ Every attempt was made to contact Naval Aviators to take the survey (those studying at the NPS Naval Safety Aviation Course were sought in addition to contacting the PAO's of both Pacific and Atlantic Naval Air Squadrons for help in distribution; no response garnered).

5. What is your commissioning source?

Survey Said for Windows and the WEB - Commission Source



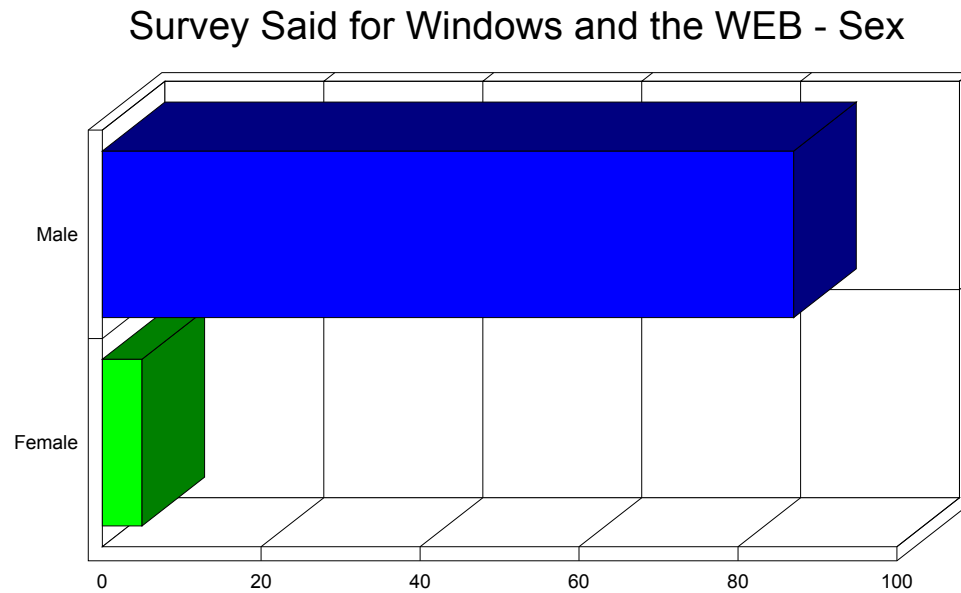
93 Respondents Answered Question # 5

Commission Source

5-1 15 16.13% OCS
5-2 38 40.86% ROTC
5-3 27 29.03% USNA
5-4 8 8.60% Enlisted Commissioning Program
5-5 0 0.00% Seaman to Admiral
5-6 5 5.38% Other⁶⁰
0 0.00% Missing Cases

⁶⁰ "Seaman To Admiral" is no longer an active commissioning program. Other responses were - Merchant Marine direct Commission, U.S. Merchant Marine Academy, and LDO/CWO.

6. What is your sex?



92 Respondents Answered Question # 6

Sex

6-1 87 94.57% Male

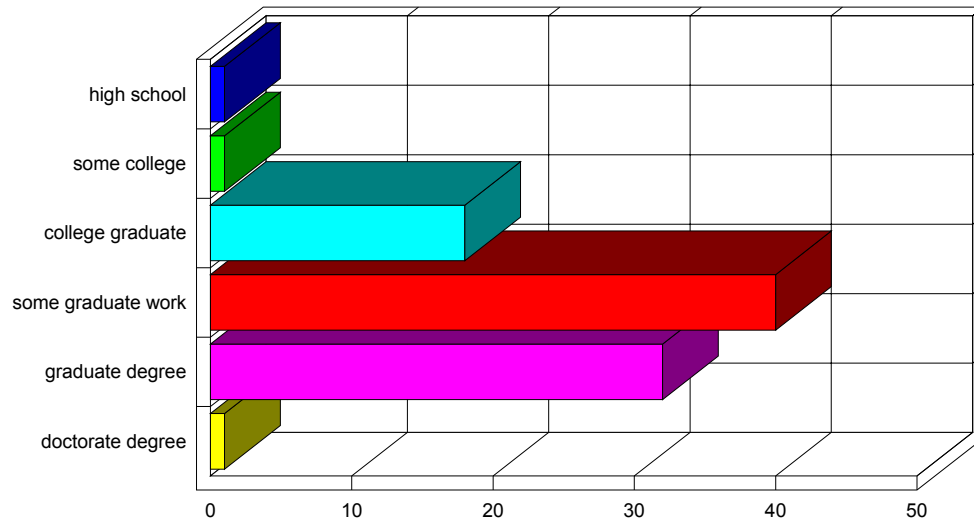
6-2 5 5.43% Female⁶¹

1 1.08% Missing Cases

⁶¹ Relative to our active duty naval forces this skew in gender seems to be in line when compared to survey respondents – (<http://www.bupers.navy.mil/mentor/totalforce.html>). Total Force Male – 333,807, 85.40%; Total Force Female – 57,045, 14.6%. Demographics are from a navy website dated March 2002. The one missing case, a respondent failed to indicate sex.

7. What is the highest level of education that you have received?

Survey Said for Windows and the WEB - Education



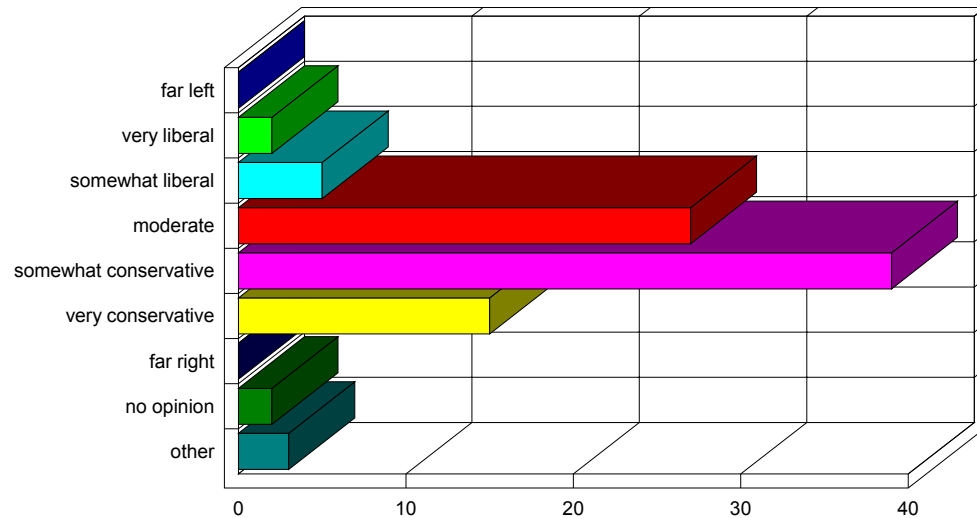
93 Respondents Answered Question # 7

Education

7-1 1 1.08% high school
7-2 1 1.08% some college
7-3 18 19.35% college graduate
7-4 40 43.01% some graduate work
7-5 32 34.41% graduate degree
7-6 1 1.08% doctorate degree
0 0.00% Missing Cases

8. How would you describe your views on political matters?

Survey Said for Windows and the WEB - Political



93 Respondents Answered Question # 8

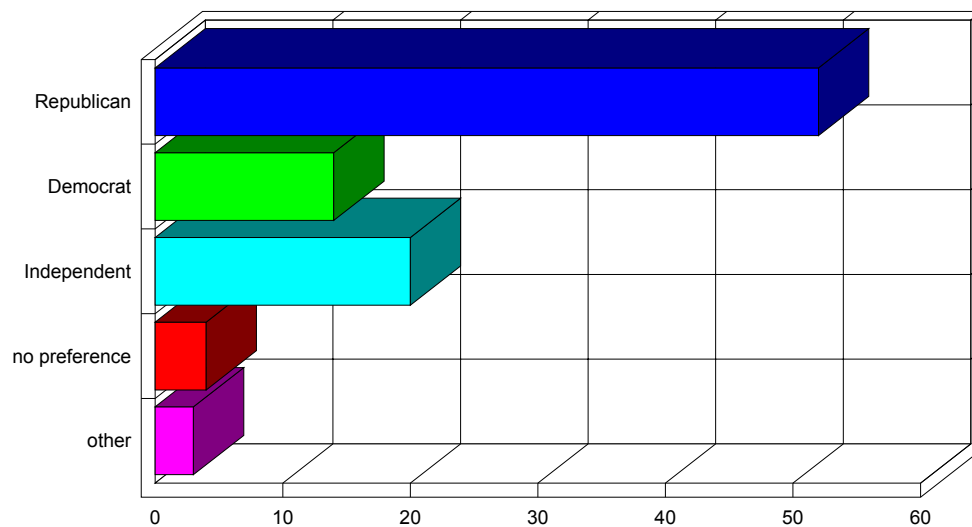
Political

| | | | |
|-----|----|--------|-----------------------|
| 8-1 | 0 | 0.00% | far left |
| 8-2 | 2 | 2.15% | very liberal |
| 8-3 | 5 | 5.38% | somewhat liberal |
| 8-4 | 27 | 29.03% | moderate |
| 8-5 | 39 | 41.94% | somewhat conservative |
| 8-6 | 15 | 16.13% | very conservative |
| 8-7 | 0 | 0.00% | far right |
| 8-8 | 2 | 2.15% | no opinion |
| 8-9 | 3 | 3.23% | other ⁶² |
| | 0 | 0.00% | Missing Cases |

⁶² Other: Independent, Libertarian.

9. Generally speaking, do you think of yourself as a Republican, a Democrat, and Independent, or what?

Survey Said for Windows and the WEB - Political type



93 Respondents Answered Question # 9

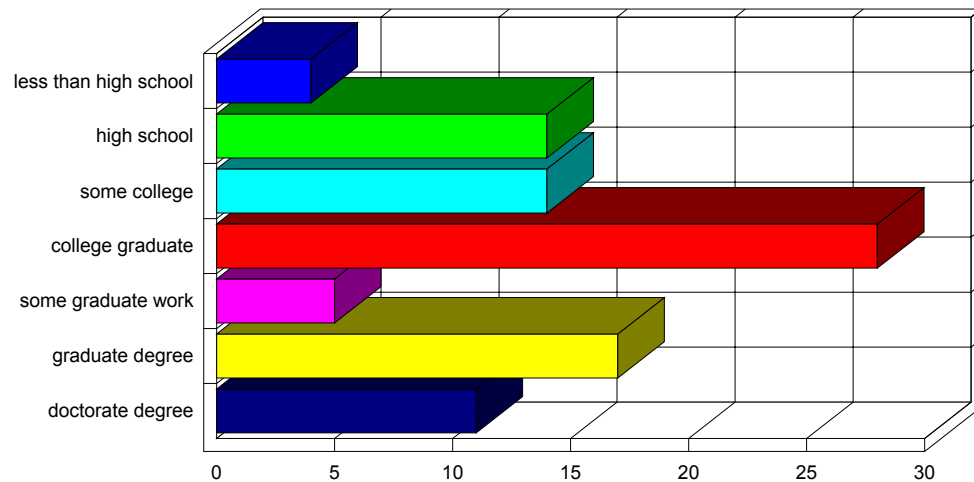
Political type

- 9-1 52 55.91% Republican
- 9-2 14 15.05% Democrat
- 9-3 20 21.51% Independent
- 9-4 4 4.30% no preference
- 9-5 3 3.23% other⁶³
- 0 0.00% Missing Cases

⁶³ Other: Registered Republican, practices non-partisanship; Libertarian.

10. What is the highest level of education that your father obtained?

Survey Said for Windows and the WEB - Father education



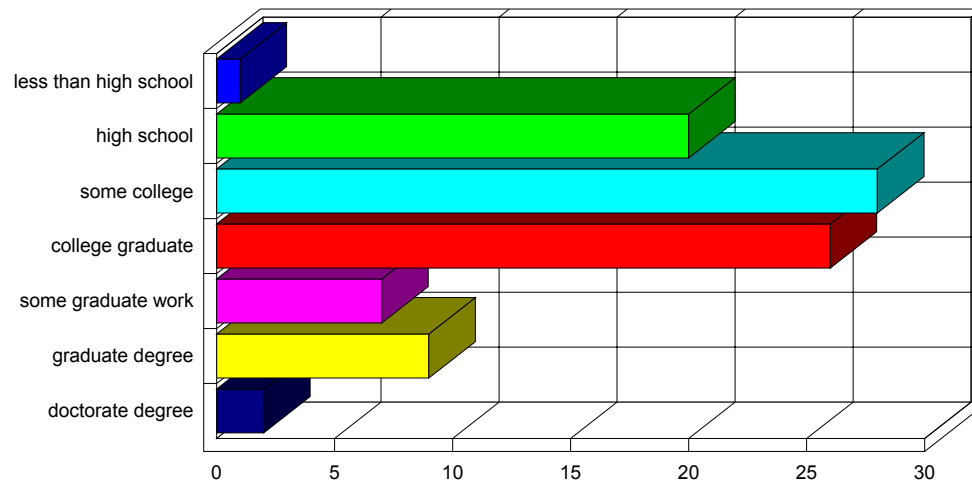
93 Respondents Answered Question # 10

Father education

| | | | |
|------|----|--------|-----------------------|
| 10-1 | 4 | 4.30% | less than high school |
| 10-2 | 14 | 15.05% | high school |
| 10-3 | 14 | 15.05% | some college |
| 10-4 | 28 | 30.11% | college graduate |
| 10-5 | 5 | 5.38% | some graduate work |
| 10-6 | 17 | 18.28% | graduate degree |
| 10-7 | 11 | 11.83% | doctorate degree |
| 0 | | 0.00% | Missing Cases |

11. What is the highest level of education that your mother obtained?

Survey Said for Windows and the WEB - Mother Education

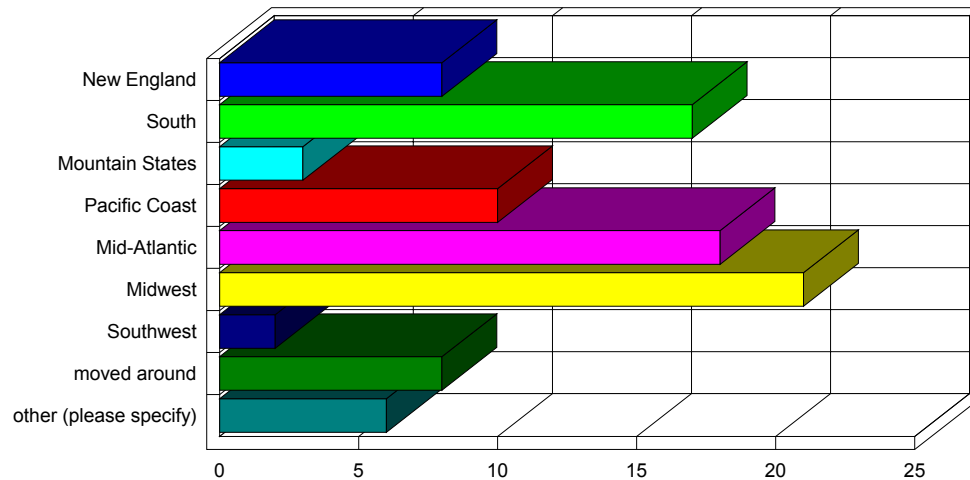


93 Respondents Answered Question # 11
Mother Education

| | | | |
|------|----|--------|-----------------------|
| 11-1 | 1 | 1.08% | less than high school |
| 11-2 | 20 | 21.51% | high school |
| 11-3 | 28 | 30.11% | some college |
| 11-4 | 26 | 27.96% | college graduate |
| 11-5 | 7 | 7.53% | some graduate work |
| 11-6 | 9 | 9.68% | graduate degree |
| 11-7 | 2 | 2.15% | doctorate degree |
| | 0 | 0.00% | Missing Cases |

12. Where did you live most of the time when you were growing up?

Survey Said for Windows and the WEB - Home of record



93 Respondents Answered Question # 12

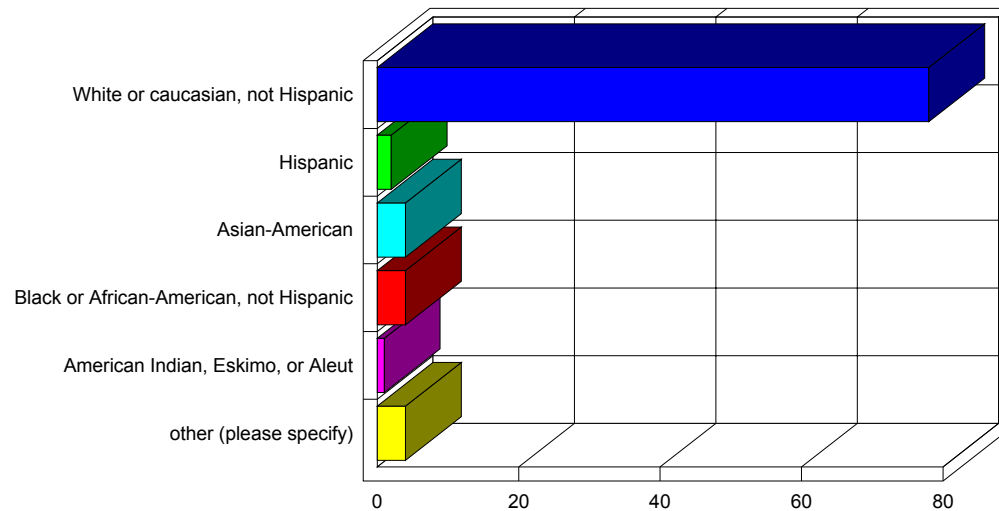
Home of record

| | | | |
|------|----|--------|--------------------------------------|
| 12-1 | 8 | 8.60% | New England |
| 12-2 | 17 | 18.28% | South |
| 12-3 | 3 | 3.23% | Mountain States |
| 12-4 | 10 | 10.75% | Pacific Coast |
| 12-5 | 18 | 19.35% | Mid-Atlantic |
| 12-6 | 21 | 22.58% | Midwest |
| 12-7 | 2 | 2.15% | Southwest |
| 12-8 | 8 | 8.60% | moved around |
| 12-9 | 6 | 6.45% | other (please specify) ⁶⁴ |
| | 0 | 0.00% | Missing Cases |

⁶⁴ Other: Puerto Rico, South Pacific, Texas and New York were the other comments.

13. What is your racial/ethnic identity?

Survey Said for Windows and the WEB - Race



93 Respondents Answered Question # 13

Race

| | | | |
|------|----|--------|---|
| 13-1 | 78 | 83.87% | White or Caucasian, not Hispanic |
| 13-2 | 2 | 2.15% | Hispanic |
| 13-3 | 4 | 4.30% | Asian-American |
| 13-4 | 4 | 4.30% | Black or African-American, not Hispanic |
| 13-5 | 1 | 1.08% | American Indian, Eskimo, or Aleut |
| 13-6 | 4 | 4.30% | other (please specify) ⁶⁵ |
| 0 | 0 | 0.00% | Missing Cases |

⁶⁵ Other: Comments included a list of combination of races categorized above.

(Questions 14-39 are designed to identify an officer's feelings towards the role of the military in the post—Cold War world and to identify bias towards the media.)

14. Which of the following do you feel are appropriate roles for the United States military to play in contemporary American society. Choose among 4, “very appropriate,” 3, “somewhat appropriate,” 2, “somewhat inappropriate,” and 1, “very inappropriate.”

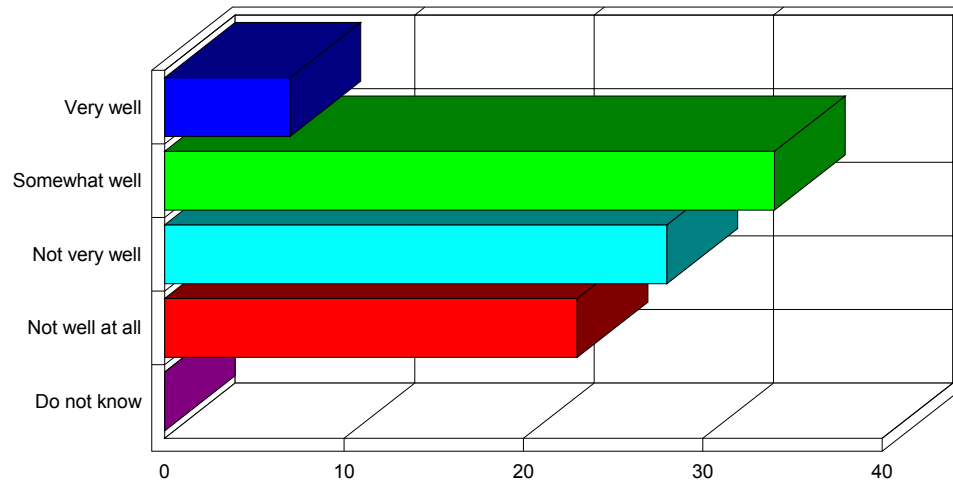
| | Median response | # of respondents |
|--|-----------------|------------------|
| Informing the public about military/national security issues | 3 | 93 |
| Education, training, career opportunities for youth | 3 | 93 |
| Domestic disaster relief | 3 | 93 |
| Model for resolution of social problems | 2 | 93 |
| Enforcement of immigration policies | 2 | 93 |
| Domestic law enforcement | 1 | 93 |

15. Which of the following do you feel are appropriate roles for the United States military to play in the post-Cold War world. Choose among 4, “very appropriate,” 3, “somewhat appropriate,” 2, “somewhat inappropriate,” and 1, “very inappropriate.”

| | Median response | # of respondents |
|--|-----------------|------------------|
| Protect the U.S. from foreign aggressors | 4 | 93 |
| Provide military advice to U.S. political leaders | 4 | 93 |
| Assist in the defense of allies | 4 | 93 |
| Assist emerging democracies with professionalization and de-politicization of their militaries | 3 | 93 |
| Protect U.S. economic interests abroad | 4 | 93 |
| Participate in multinational peacekeeping efforts | 3 | 93 |
| Support humanitarian relief efforts | 3 | 93 |
| Intervene in civil wars when it is deemed in the U.S. national interest | 3 | 93 |
| Support and participate in foreign counter-narcotics activities | 3 | 93 |

16. How well do you think the media keep the public informed about military and national security issues?

Survey Said for Windows and the WEB - National Security



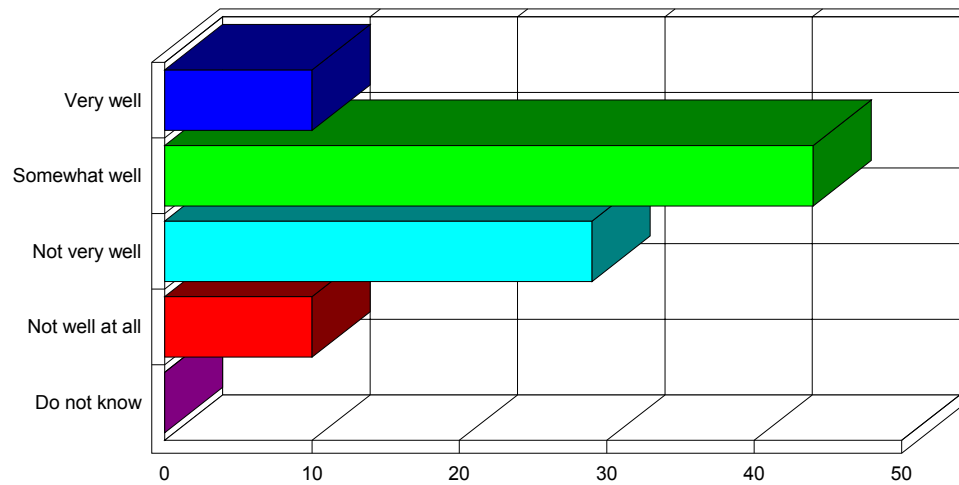
92 Respondents Answered Question # 16

National Security

| | | | |
|------|----|--------|-----------------|
| 16-1 | 7 | 7.61% | Very well |
| 16-2 | 34 | 36.96% | Somewhat well |
| 16-3 | 28 | 30.43% | Not very well |
| 16-4 | 23 | 25.00% | Not well at all |
| 16-5 | 0 | 0.00% | Do not know |
| | 1 | 1.08% | Missing Cases |

17. How well do you think the military fulfills its responsibility to keep the public informed about military and national security issues?

Survey Said for Windows and the WEB - Military to public



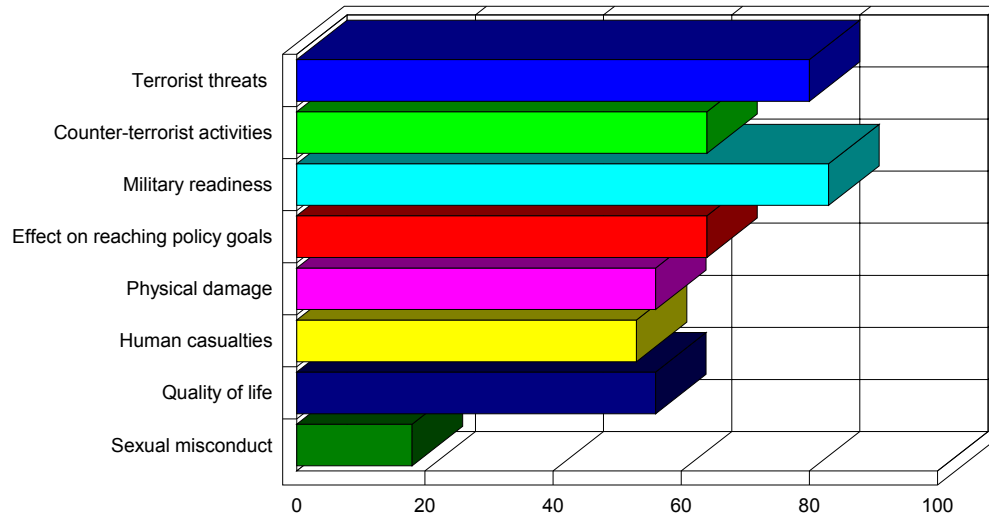
93 Respondents Answered Question # 17

Military to public

| | | | |
|------|----|--------|-----------------|
| 17-1 | 10 | 10.75% | Very well |
| 17-2 | 44 | 47.31% | Somewhat well |
| 17-3 | 29 | 31.18% | Not very well |
| 17-4 | 10 | 10.75% | Not well at all |
| 17-5 | 0 | 0.00% | Do not know |
| | 0 | 0.00% | Missing Cases |

18. Do you *want* to know about the following issues?

Survey Said for Windows and the WEB - Information



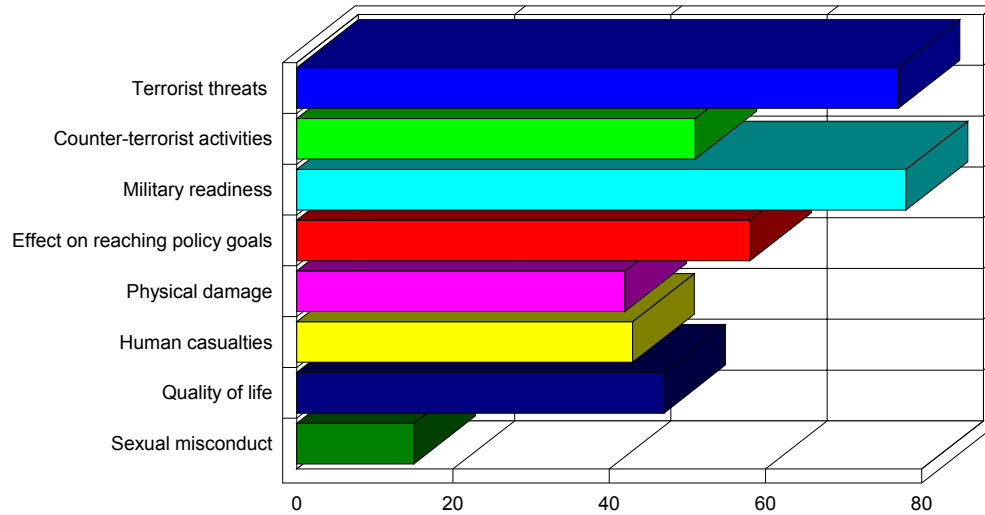
91 Respondents Answered Question # 18

Information

- 18-1 80 87.91% Terrorist threats
- 18-2 64 70.33% Counter-terrorist activities
- 18-3 83 91.21% Military readiness
- 18-4 64 70.33% Effect on reaching policy goals
- 18-5 56 61.54% Physical damage
- 18-6 53 58.24% Human casualties
- 18-7 56 61.54% Quality of life
- 18-8 18 19.78% Sexual misconduct
- 2 2.15% Missing Cases

19. Do you feel that you *need* to know about the following issues?

Survey Said for Windows and the WEB - Issues



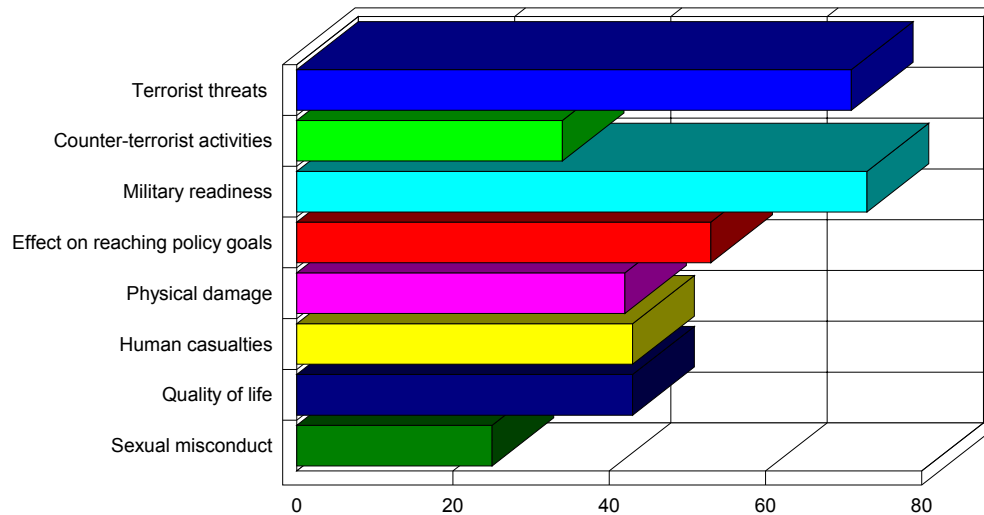
92 Respondents Answered Question # 19

Issues

| | | | |
|------|----|--------|---------------------------------|
| 19-1 | 77 | 83.70% | Terrorist threats |
| 19-2 | 51 | 55.43% | Counter-terrorist activities |
| 19-3 | 78 | 84.78% | Military readiness |
| 19-4 | 58 | 63.04% | Effect on reaching policy goals |
| 19-5 | 42 | 45.65% | Physical damage |
| 19-6 | 43 | 46.74% | Human casualties |
| 19-7 | 47 | 51.09% | Quality of life |
| 19-8 | 15 | 16.30% | Sexual misconduct |
| 1 | 1 | 1.08% | Missing Cases |

20. Do you feel that you *have a right* to know about the following issues?

Survey Said for Windows and the WEB - Issues3



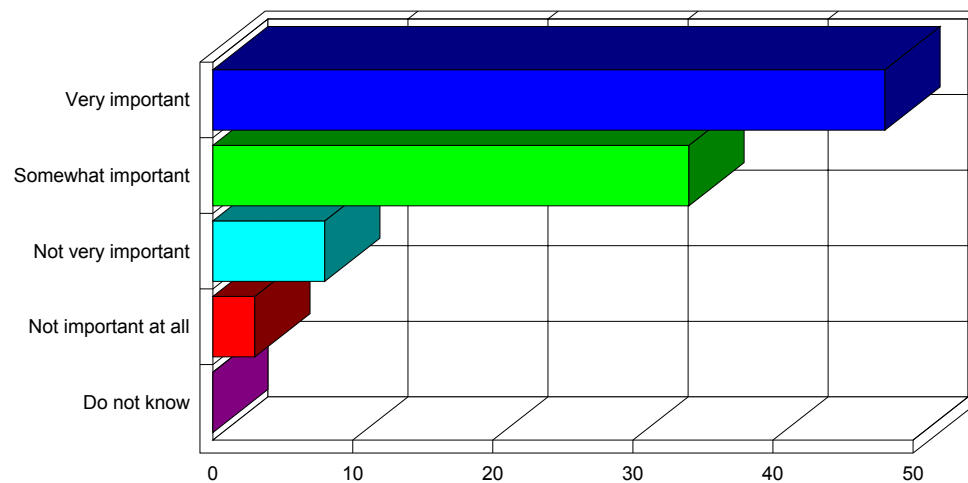
88 Respondents Answered Question # 20

Issues3

| | | | |
|------|----|--------|---------------------------------|
| 20-1 | 71 | 80.68% | Terrorist threats |
| 20-2 | 34 | 38.64% | Counter-terrorist activities |
| 20-3 | 73 | 82.95% | Military readiness |
| 20-4 | 53 | 60.23% | Effect on reaching policy goals |
| 20-5 | 42 | 47.73% | Physical damage |
| 20-6 | 43 | 48.86% | Human casualties |
| 20-7 | 43 | 48.86% | Quality of life |
| 20-8 | 25 | 28.41% | Sexual misconduct |
| | 5 | 5.38% | Missing Cases |

21. How important do you feel it is for members of the public to receive accurate and timely information on military and national security issues and events?

Survey Said for Windows and the WEB - Public and national security



93 Respondents Answered Question # 21

Public and national security

21-1 48 51.61% Very important
 21-2 34 36.56% Somewhat important
 21-3 8 8.60% Not very important
 21-4 3 3.23% Not important at all
 21-5 0 0.00% Do not know
 0 0.00% Missing Cases

22. On a scale of 1 to 10, with 10 being representing the highest importance rating, rate the importance of the following issues affecting the public's awareness of the military.

| | Median response | # of respondents |
|--|-----------------|------------------|
| No current military threats to the United States | 5 | 84 |
| Regional conflicts are far away and too difficult to understand | 7 | 86 |
| <i>There are more important personal issues to worry about (economy, education, school violence)</i> | 8 | 86 |
| <i>Declining share of Americans have served in the military (lack of personal experience)</i> | 8 | 86 |
| Elimination of the draft | 4 | 85 |
| Technowar: Battles are being fought with technology, with very few if any U.S. casualties | 6 | 85 |
| Too much on the American plate (lack of time to give the military serious consideration) | 6 | 86 |
| Our current set of role models and heroes are not from the military (all | 7 | 84 |

| | | |
|---|----------|-----------|
| sports and entertainment) | | |
| Because it's about where they want to be (medium level of interest, therefore medium level of awareness) | 6 | 85 |
| Perceived change in mission of the military from U.S. defense to global peacekeeper | 6 | 85 |
| U.S. is entertainment oriented society; military events are not entertainment | 5 | 84 |
| The post-Cold-War message (we won!) | 5 | 86 |
| Changes in the media (cutbacks in funding, number of reporters, etc.) | 3 | 85 |
| Lack of serious intellectual debate or challenge coming from the media (not as much investigative reporting, detail) | 6 | 86 |
| Sense that the public feels powerless/disconnected in general (high level of apathy) | 6 | 86 |
| Impact of negative news stories about the military (sexual misconduct and scandals) | 6 | 84 |

23. On a scale of 1 to 10, with 10 being representing the highest importance rating, rate the importance of the following issues that (would) affect your willingness to share information with the media.

| | Median response | # of respondents |
|--|-----------------|------------------|
| Concern about impact on current military operations | 10 | 88 |
| Lack of general trust in the media by members of the military | 7 | 88 |
| Fear that comments will be taken out of context and misinterpreted | 9 | 87 |
| Impact on personal careers (advancement or otherwise) | 6 | 87 |
| The "good news" offered won't be published | 7 | 86 |
| A sense that the story has already been written—media are just looking for a footnote or a source | 5 | 86 |
| A sense that the media don't truly respect or understand the military's complexity and culture | 7 | 86 |
| Lead by example (senior officers not going forward on key issues; therefore, junior officers continue with this style) | 5 | 85 |
| Informal mentoring: People who have been burned in the past pass this lesson on to new members of the military | 5 | 85 |
| Personal experience of being burned (I've been burned once, I won't get burned again) | 2 | 85 |
| Civilian leadership not being visible or encouraging to media access | 4 | 83 |
| Potential for negative impact on congressional funding efforts | 3 | 83 |
| Not comfortable with the skill levels to deliver the information and respond to the kinds of questions asked | 6 | 84 |
| Impact on future programs if information in the media precedes procurement | 4 | 83 |
| No personal benefit or value | 3 | 85 |
| A level of arrogance that the military "owns" the data | 1 | 82 |

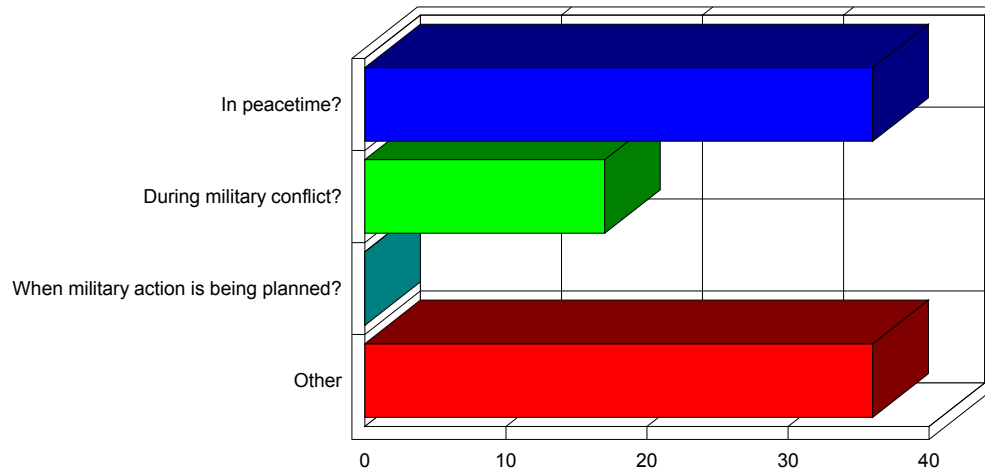
24. In general, how would you access the Navy's relation ship with the media. Choose among 4, "excellent," 3, "good," 2, "fair," and 1, "poor."

90 Respondents answered Question#24

Median response: 3

25. Should the media have *maximum* access to the military:

Survey Said for Windows and the WEB - Media access



89 Respondents Answered Question # 25

Media access

25-1 36 40.45% In peacetime?

25-2 17 19.10% During military conflict?

25-3 0 0.00% When military action is being planned?

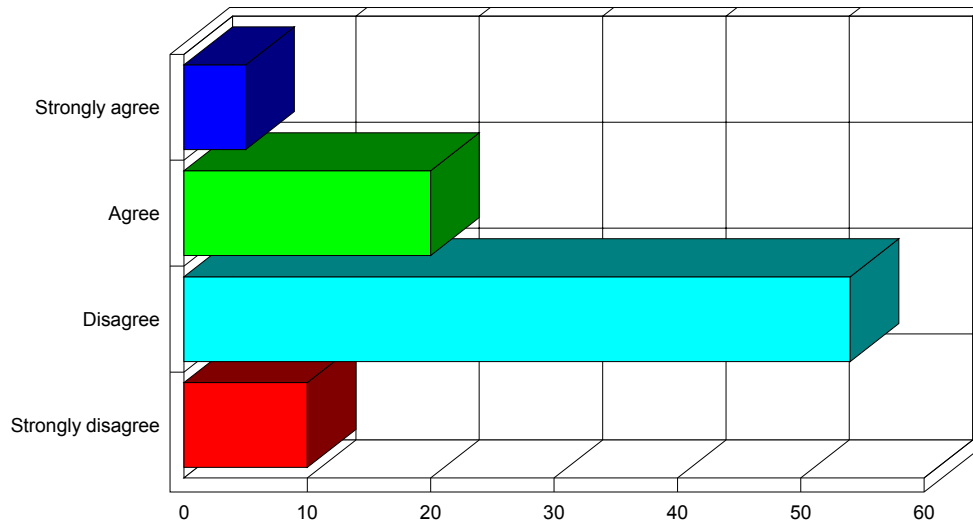
25-4 36 40.45% Other⁶⁶

4 4.30% Missing Cases

⁶⁶ Other: Comments were varied. After subsequent review of the question, the author feels the word *maximum* was an inappropriate word. The question was intended to evoke responses to “the degree” of access to the military. The officers sampled picked up on this and provided the following feedback: answers ranged from “never, limited access, situation dependent, when leadership deems fit, as long as OPSEC is observed, all the above, to total access.”

26. Public affairs *encourages* military officers to speak with reporters:

Survey Said for Windows and the WEB - PAO



89 Respondents Answered Question # 26

PAO

26-1 5 5.62% Strongly agree

26-2 20 22.47% Agree

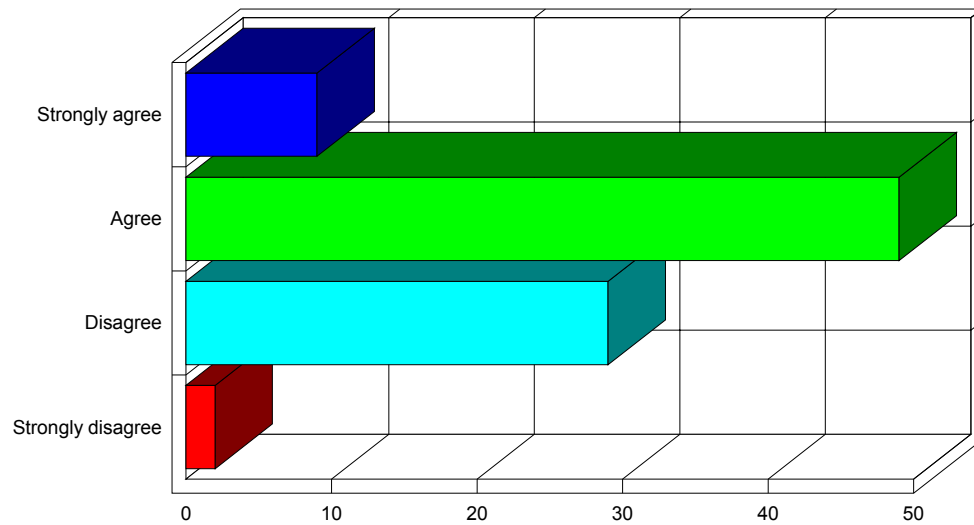
26-3 54 60.67% Disagree

26-4 10 11.24% Strongly disagree

4 4.30% Missing Cases

27. Public affairs tends to restrict media access to information:

Survey Said for Windows and the WEB - PAO2



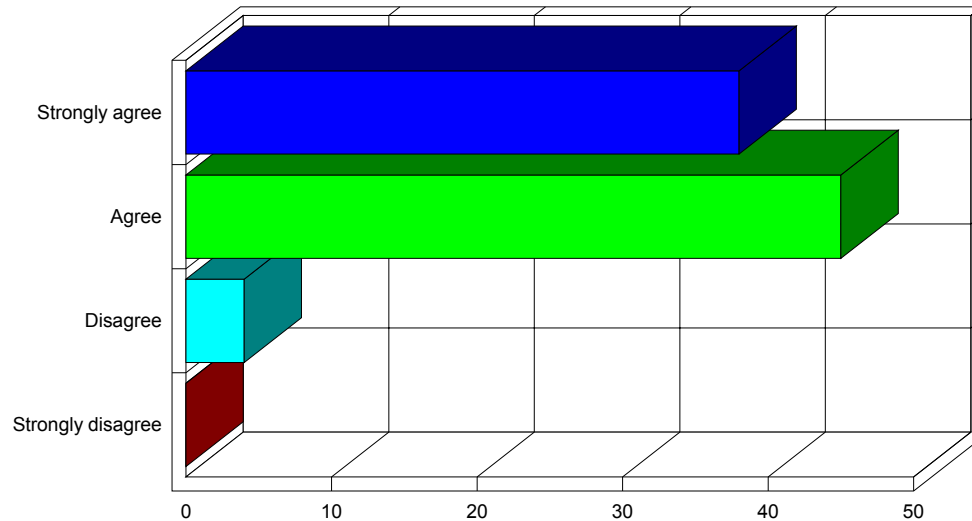
89 Respondents Answered Question # 27

PAO2

| | | | |
|------|----|--------|-------------------|
| 27-1 | 9 | 10.11% | Strongly agree |
| 27-2 | 49 | 55.06% | Agree |
| 27-3 | 29 | 32.58% | Disagree |
| 27-4 | 2 | 2.25% | Strongly disagree |
| | 4 | 4.30% | Missing Cases |

28. Public affairs tends to follow the orders and desires of senior civilian and military leadership in deciding how to approach setting levels of access:

Survey Said for Windows and the WEB - PAO3



87 Respondents Answered Question # 28

PAO3

28-1 38 43.68% Strongly agree
 28-2 45 51.72% Agree
 28-3 4 4.60% Disagree
 28-4 0 0.00% Strongly disagree
 6 6.45% Missing Cases

29. How would you rate the relative risk of speaking with the media in regards to the following issues. Choose among 4, “a very serious risk,” 3, “a fairly serious risk,” 2, “not a very serious risk,” and 1, “not a risk at all.”

| | Median response | # of respondents |
|---|-----------------|------------------|
| Battle plans or operations | 4 | 89 |
| Intelligence issues | 4 | 89 |
| Criticism of current defense or security policies | 3 | 89 |
| Issues which could embarrass a senior officer | 3 | 89 |
| Facts contradicting official statement or policies | 3 | 89 |
| Issues which are the responsibility of superiors | 3 | 89 |
| Scandal in the officer’s office or base | 3 | 89 |
| Sensitive social issues | 2 | 89 |
| Public policy relating to the military | 2 | 89 |
| Capabilities of declassified weapons and technology | 2 | 89 |
| Personnel issues | 2 | 89 |
| Quality of life issues | 2 | 89 |
| Basic and advanced training techniques | | |

30. In speaking with the media, how constrained do you/officers feel due to the influence of: (Choose among 4, “a great deal,” 3, “a fair amount,” 2, “not very much,” and 1, “not at all.”)

| | Median response | # of respondents |
|--------------------------|-----------------|------------------|
| Civilian leaders | 2 | 88 |
| Superior officers | 3 | 88 |
| Public affairs officers | 2 | 88 |
| Peers | 2 | 88 |

31. Rate the following consequences that concern you most when speaking with reporters: (Choose among 4, “a very serious concern,” 3, “a fairly serious concern,” 2, “not a very serious concern,” and 1, “not a concern at all.”)

| | Median response | # of respondents |
|---------------------------------------|-----------------|------------------|
| Harming national security | 4 | 88 |
| Embarrassing your service | 3 | 88 |
| Putting your career at risk | 2 | 88 |
| Hurting your chances for promotion | 2 | 88 |
| Hurting your standing with colleagues | 2 | 88 |

32. On a scale of 1 to 10, with 10 being representing the highest importance rating, rate the importance of the following factors that you view are affecting the media’s ability to inform the public.

| | Median response | # of respondents |
|---|-----------------|------------------|
| The current news premium is on sound bites—sensationalism vs. depth | 9 | 83 |
| The ability to raise the priority of military stories with editors | 6 | 82 |
| Complexity of military information doesn’t fit the new journalism template/format | 7 | 82 |
| The level of budget and resource cuts experienced by the media in coverage resources for military news and events | 5 | 80 |
| Lack of general access to military personnel | 4 | 82 |
| Lack of patience by media to give military time to prepare and analyze | 5 | 82 |
| Low level of public interest/apathy | 6 | 82 |
| Too much focus on issues and officers in the Beltway; not enough human-interest stories of personal relevance | 5 | 82 |
| Challenging for the media to assess public interest in a specific regional conflict | 5 | 81 |
| Concern that the military is trying to spin or control the story (therefore, no news might be preferable) | 6 | 81 |
| Lack of personal military experience by reporters or writers | 8 | 81 |
| Lack of consistent skills by the military to deliver the information | 5 | 81 |
| Public’s concern about media accountability in general | 5 | 81 |
| Military news doesn’t sell newspapers | 4 | 79 |

33. Prior to September 11th, 2001, how do you think the end of the Cold War has influenced:

(86 out of 93 Respondents Answered Question # 33 with 7 or 7.53% Missing Cases)

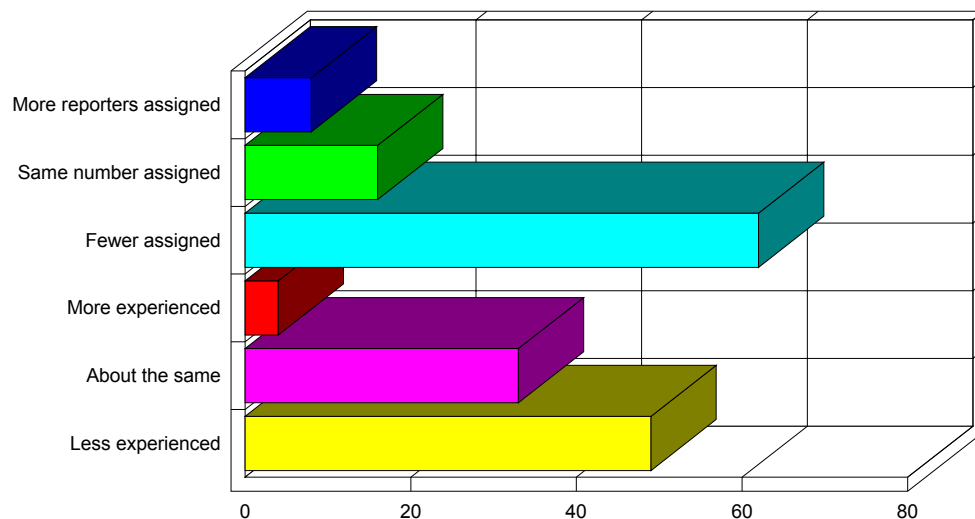
The assignment of reporters to cover military and security issues?

| | | | |
|------|----|--------|-------------------------|
| 33-1 | 8 | 9.30% | More reporters assigned |
| 33-2 | 16 | 18.60% | Same number assigned |
| 33-3 | 62 | 72.09% | Fewer assigned |

The level of experience reporters have when covering military and security issues?

| | | | |
|------|----|--------|------------------|
| 33-4 | 4 | 4.65% | More experienced |
| 33-5 | 33 | 38.37% | About the same |
| 33-6 | 49 | 56.98% | Less experienced |

Survey Said for Windows and the WEB - Sept 11



34. Since September 11th, how do you think the United States' War on Terror has influenced:

(85 out of 93 Respondents Answered Question # 34 with 8 or 8.6% Missing Cases)

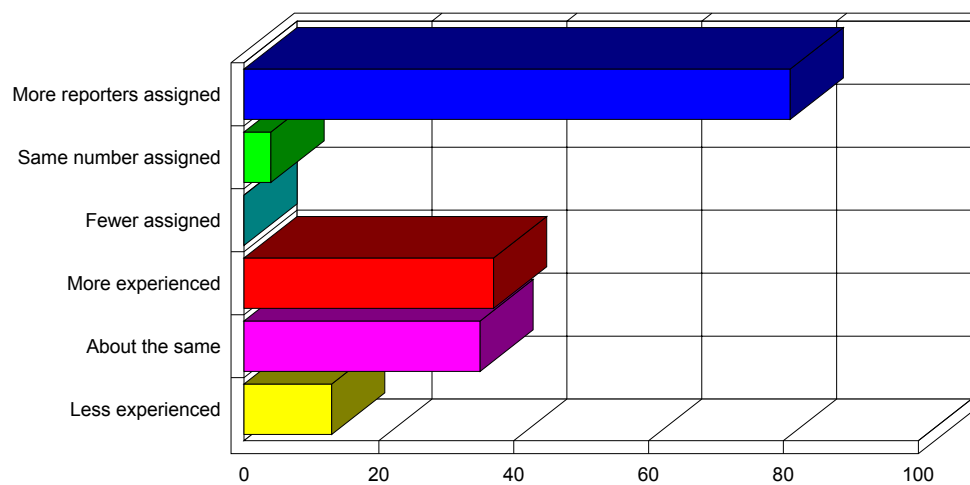
The assignment of reporters to cover military and security issues?

| | | | |
|------|----|--------|-------------------------|
| 34-1 | 81 | 95.29% | More reporters assigned |
| 34-2 | 4 | 4.71% | Same number assigned |
| 34-3 | 0 | 0.00% | Fewer assigned |

The level of experience reporters have when covering military and security issues?

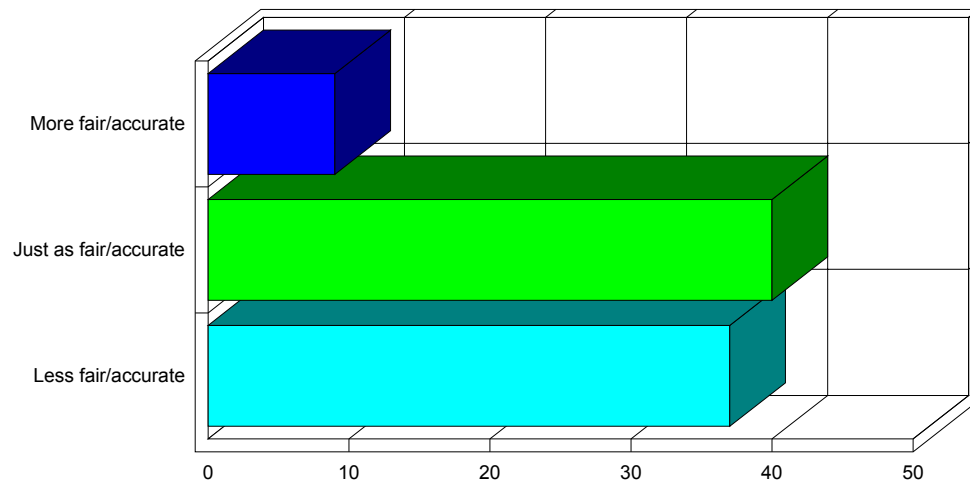
| | | | |
|------|----|--------|------------------|
| 34-4 | 37 | 43.53% | More experienced |
| 34-5 | 35 | 41.18% | About the same |
| 34-6 | 13 | 15.29% | Less experienced |

Survey Said for Windows and the WEB - War on Terror



35. When a reporter wants to do a story on the military or a national security issue, it must be approved by an editor or other gatekeeper. What effect do you think editors and gatekeepers have on how fairly and accurately stories get reported?

Survey Said for Windows and the WEB - Media gatekeepers



86 Respondents Answered Question # 35

Media gatekeepers

35-1 9 10.47% More fair/accurate

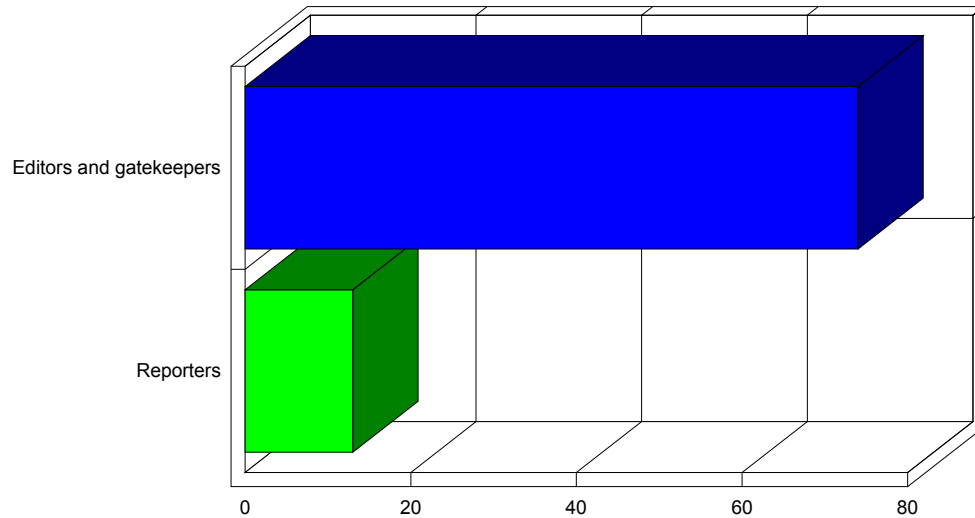
35-2 40 46.51% Just as fair/accurate

35-3 37 43.02% Less fair/accurate

7 7.53% Missing Cases

36. Do editors and gatekeepers or individual reporters have a greater role in determining which military and national security issues get reported in the media?

Survey Said for Windows and the WEB - Media editors



87 Respondents Answered Question # 36

Media editors

36-1 74 85.06% Editors and gatekeepers

36-2 13 14.94% Reporters

6 6.45% Missing Cases

37. How important are the following considerations to editors and gatekeepers?

(87 out of 93 Respondents Answered Question # 37 with 6 or 6.45% Missing Cases)

Informing the public:

37-1 11 12.64% Very important

37-2 48 55.17% Important

37-3 25 28.74% Not very important

37-4 3 3.45% Not important at all

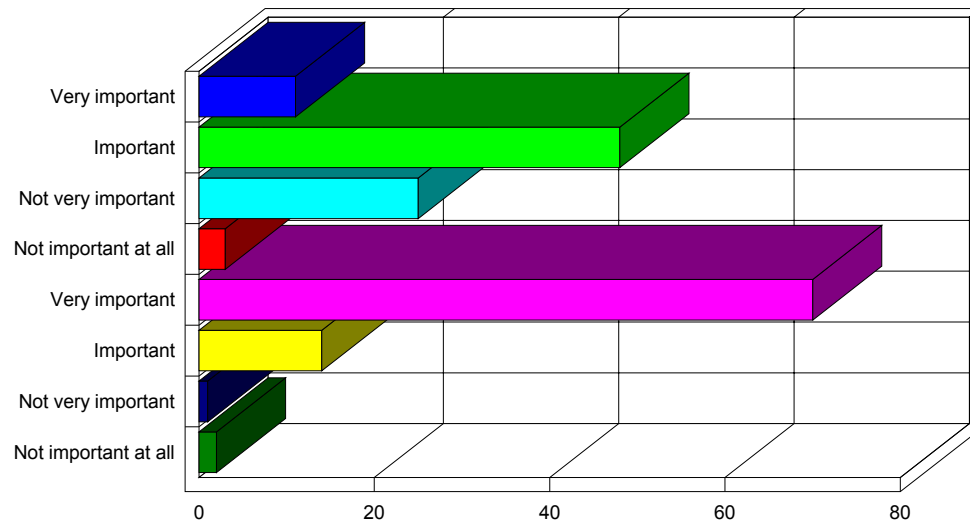
Selling more copies or getting better ratings:

37-5 70 80.46% Very important

37-6 14 16.09% Important

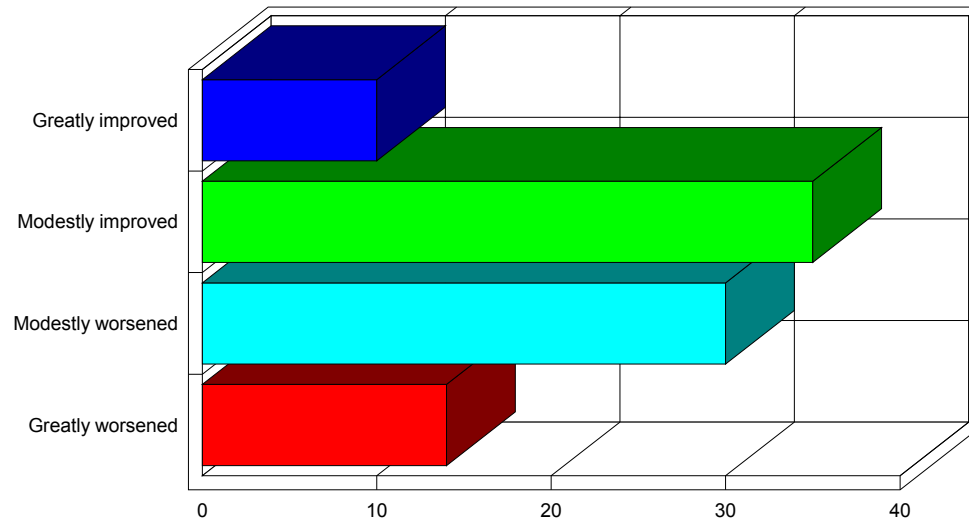
37-7 1 1.15% Not very important
37-8 2 2.30% Not important at all

Survey Said for Windows and the WEB - Selling news



38. How has the rise of the 24-hour news television channels and increased competition influenced the quality of news reporting of military and security issues?

Survey Said for Windows and the WEB - 24 hr news



89 Respondents Answered Question # 38

24 hr news

38-1 10 11.24% Greatly improved

38-2 35 39.33% Modestly improved

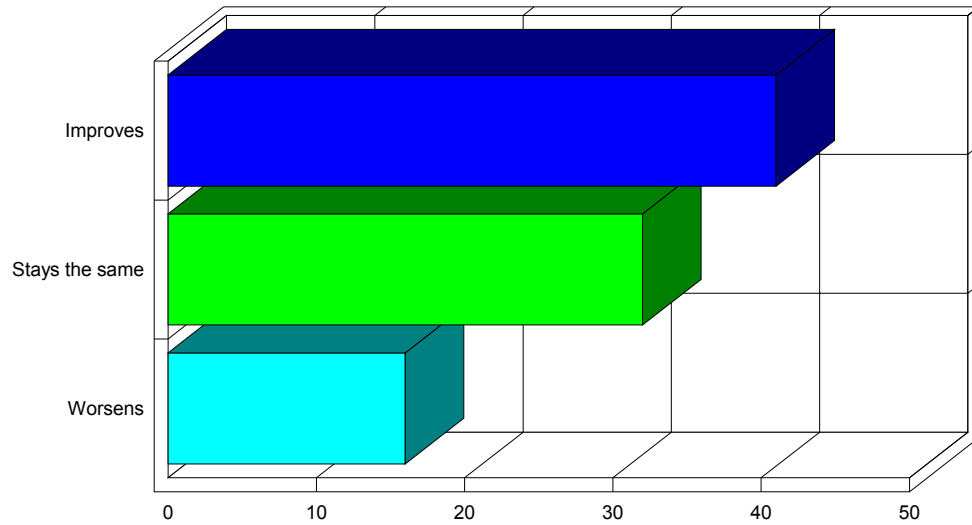
38-3 30 33.71% Modestly worsened

38-4 14 15.73% Greatly worsened

4 4.30% Missing Cases

39. How does the Internet affect the quality of reporting on military and national security issues?

Survey Said for Windows and the WEB - Internet news



89 Respondents Answered Question # 39

Internet news

39-1 41 46.07% Improves

39-2 32 35.96% Stays the same

39-3 16 17.98% Worsens

4 4.30% Missing Case

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APPENDIX D - NAVAL SCIENCE CURRICULUM FOR NROTC AND CORE CURRICULUM FOR NAVAL ACADEMY MIDSHIPMEN

NROTC/MMR CURRICULUM 2003⁶⁷

- INTRO TO NAVAL SCIENCE
- SEA POWER
- SHIPS SYSTEMS I (ENGINEERING)
- LEADERSHIP & MANAGEMENT
- NAVIGATION I
- NAVIGATION II
- SHIPS SYSTEMS II (WEAPONS)
- LEADERSHIP & ETHICS
- AMPHIBIOUS WARFARE
- EVOLUTION OF WARFARE
- NAVAL SCIENCE LABORATORY
- NAVAL SCIENCE FOR THE MERCHANT MARINE, P1550/13
- NAVAL SCIENCE FOR THE MERCHANT MARINE, P1550/14
- NAVAL SCIENCE FOR THE MERCHANT MARINE, P1550/15

NROTC/MMR COURSE DESIGNATIONS 2003

FRESHMAN

INTRODUCTION TO NAVAL SCIENCE (101) --

P1550/5 (4-96) Change 9-96, 7-97, 9-98, 8-00, 6-01

SEAPOWER (202)

P1550/6 (12-02)

SOPHOMORE

SHIPS SYSTEMS I (ENGINEERING) (102) --

P1550/4 (4-96) Change 5-97, 8-01

LEADERSHIP & MANAGEMENT (401)

P1550/11 (8-00) Change 1-02

JUNIOR

NAVIGATION I (301) --

P1550/3 (8-01)

Change 2-02

⁶⁷ Outline of NROTC/MMR curriculum summarized from CNET website "NAVAL SCIENCE CURRICULUM." <https://www.cnet.navy.mil/cnet/pns2003/>.

NAVIGATION II (302)
P1550/2 (4-96)
Change 12-96, 6-00

SENIOR

SHIP SYSTEMS II (WEAPONS) (201) --
P1550/1 (11-99) Change 8-00
LEADERSHIP & ETHICS (402)
P1550/8 (11-02)

MARINE AMPHIBIOUS WARFARE (410) --
P1550/10 (11-93) Change 8-00

EVOLUTION OF WARFARE (310) --
P1550/7 (3-94) Change 6-98

LAB NAVAL SCIENCE LABORATORY --
P1550/12 (6-96) Change 8-97

MMR NAVAL SCIENCE FOR THE MERCHANT MARINE OFFICER --
P1550/13 (12-00) P1550/14 (602)
P1550/15 (8-97) w/Change 8-00, 2-01

***CORE AND PROFESSIONAL CURRICULUM FOR NAVAL ACADEMY
MIDSHIPMEN 2004⁶⁸***

To prepare midshipmen as Navy officerNavy officers, the Naval Academy's curriculum blends professional subjects with required and elective courses similar to those offered at leading civilian colleges. The curriculum has three basic elements:

- core requirements in engineering, natural sciences, the humanities and social sciences, to assure that graduates are able to think, solve problems and express conclusions clearly;
- core academic courses and practical training to teach the professional and leadership skills required of Navy and Marine Corps officers; and
- an academic major in a subject chosen by midshipmen to develop their individual interests and talents.

⁶⁸ A summary of the elements of the USNA core curriculum and professional educations were taken from the following internet link <http://www.usna.edu/Catalog/>; specifically, Ch 1, p 4 and Ch 4, 54-56.

Core Curriculum

In four years at the Naval Academy, students are required to take certain core courses to make sure they are well prepared for the major career-path options available to Navy and Marine Corps officers. Majors courses also prepare midshipmen for advanced professional training and postgraduate education, which are expected of nearly all Navy officerNavy officers. Through required courses in engineering, natural sciences, social sciences, the humanities, professional military subjects and physical education, the Naval Academy gives midshipmen a balanced education to open practically any door of opportunity in the future.

During plebe or freshman year, nearly all courses are required. The required courses form the foundation for the more advanced courses chosen by upper class midshipmen. Some core requirements in the upper class years have alternative courses from which to choose, depending on your academic background, abilities and major.

The typical academic schedule for plebes includes five courses in each of two semesters:

Plebe year, first semester — 16 credit hours

- Calculus I — Most begin here, some validate and are placed into later calculus courses and a few plebes not adequately prepared for calculus take a pre-calculus course that does not count as part of the minimum mathematics requirement.
- Chemistry I — Including laboratories.
- U.S. Government and Constitutional Development — The foundation of American democracy.
- Leadership and Human Behavior – An examination of the fundamentals of leadership within the context of individual and group behavior.
- Rhetoric and Introduction to Literature I — Some plebes take a practical writing course to prepare for this class.

Plebe year, second semester — 18 credit hours

- In addition to these courses taken for credit, a few hundred plebes who have had little exposure to computers are provided with six weeks of training.

- Calculus II — Continuation of the first-semester course.
- Chemistry II — Continuation of the first-semester course.
- American Naval Heritage — A history of this country's Navy.
- Fundamentals of Naval Science — The basic elements of shipboard operation, organization and propulsion.
- Rhetoric and Introduction to Literature II.

Professional Courses and Training

Professional courses and training are an important part of the Naval Academy's integrated program. Required courses in such areas as naval science, engineering, navigation and weapons systems give midshipmen a working knowledge of modern naval operations and technology.

Courses in leadership, ethics and military law help prepare them for leadership responsibilities as an upper class midshipman and a commissioned officer. Physical education teaches midshipmen the value of physical fitness and staying fit for life. Eight weeks of annual summer training introduces them to operational units of the Navy and Marine Corps, life at sea and the responsibilities of a junior officer.

Fourth Class (Plebe) Year

Professional courses — two required introductory classes in naval science and leadership. Courses include classroom studies and lab sessions in operational trainers and afloat in yard patrol craft.

Third class year

Professional courses — three required in navigation, naval engineering, ethics and moral reasoning

Second class year

Professional courses — five are required, including courses in strategy and tactics, naval engineering and weapons. Also required are naval electricity and electronics and a leadership course that focuses on the dynamic interactions of leader, followers, and situation.

First class year

Professional courses — the three required courses are a weapons course exploring warfare systems design, a law course covering military justice and the law of war, and a junior officer seminar.

APPENDIX E - NAVY MEDIA TRAINING PROGRAM

24 Jun 03

MEMORANDUM

From: OI-31

To: CI

Info: EA

Subj: NASA 26 JUNE MEDIA TRAINING

We are conducting media training for NASA Shuttle Program Officials Mr. Bryan O'Connor and Mr. Bill Parsons at the Naval Media Center on 26 June from 0900 – 1130. NASA PAO's attending are:

1. Allard Beutel, lead for space flight, formerly a CNN news producer
2. Al Feinberg, member of the space flight PAO team, formerly a network feature news reporter (ABC, Fox)
 - Melissa Motichek, member of the space flight PAO team, also from CNN, an international news producer

Proposed Schedule:

0900 Arrival, greeted by RADM Pietropaoli, CAPT Gradisher, CDR Fenick⁶⁹
0910 Media Training Briefing – RADM Pietropaoli, CDR Fenick
0945 Stand-up Interview conducted by LT Smith
1000 Stand-up Interview feedback – RADM Pietropaoli, CDR Fenick
1020 Remote Interview conducted by CAPT Rich Marin
1035 Media Ambush –LT Salata, LT Deloach, LT Schultz, LT Smith, ENS Lockett
1045 Remote Interview/Media Ambush feedback – Press Conference Brief
1110 Press Conference – CAPT Marin, LT Salata, LT Deloach, LT Schultz, LT Smith, ENS Lockett, Brook Carroll, LT Gyapong
1125 Press Conference feedback – RADM Pietropaoli, CDR Fenick

Media Center support is provided by:

Sen. Engineer, Gary Craddock
TV Techs, Robbert Goddard, John Zador
TV Production Specialist, Wayne Miller, Paul Hernandez
Videographer, Jeff Cordia, Dwayne Jones
Audio Engineer, Delet Peters
Stage Lighting and Directing, Reed Downey
Lighting Technician, Charles Mecca
Editors, Richard Holland, Merle Livingston, Braddum Davis

⁶⁹ Notes provided by Navy Commander William R. Fenick, News Desk Director, DoN Office of Information as an attachment via electronic mail 10 Sep 2003.

Director, John Morrissey, Andrew Miller
Asst. Director, Maria Cassidy

(Media Center personnel are fully cross-trained and can substitute positions. The exact personnel manning each position will be finalized the morning of media training due to emergent manpower requirements, etc.)

Our goal for this training is to raise the awareness of challenges to effectively communicating the missions and messages of NASA in a variety of news gathering formats.

Department of the Navy Office of Information Media Training

(The following is an outline of the training program briefed to senior military officers)

1. Why media training?
 - Old thinking: “Just don’t do it”
 - Interaction with the media is inevitable
 - Master it!
2. Why engage the media?
 - Get your message out to the most people
 - Including your own
 - You want to engage on your own terms
3. Who’s the spokesperson
 - Not Necessarily the PAO...especially in a crisis
 - Responsibility, authority, credibility
 - Today’s media want more than simply a spokesperson
 - They want access to the decision maker
4. The PAO
 - Corporate expert
 - “Keeper of your Message”
 - Facilitate and coordinate the “engagement”
 - Prepare the “talent”
 - Works for YOU
5. Rules of Engagement
 - Set when interview arranged and restated at beginning of interview
 - a. On the record
 - For attribution; name and title
 - b. On Background
 - Attribution is negotiable; “official” or “source”
 - Can be for immediate use or “embargoed”
 - Off the record vs deep background
6. News Cycle
 - Traditional

- Print
 - TV
 - 24 Hour
 - News Service (Wire)
 - Cable spin-offs
 - “New” Media
7. The Four “Cs”
- a. Commercials
 - Choose two or three communication points --- “commercials”
 - Make sure you know what the reporter’s topic is in advance
 - Anticipate likely questions, and work to fit your commercials into your answers
 - b. Control
 - Be positive and energetic
 - Answer questions to your advantage
 - Rephrase when possible
 - Avoid
 - Comparisons
 - Promises
 - Speculating about the hypothetical
 - Repeating negatives
 - Correct inaccuracies
 - Do your research
 - Who’s doing the interview?
 - What is the setting (studio, office, etc.)?
 - Who else will be on the show?
 - c. Cosmetics
 - Wear the right clothing
 - Consider the camera’s view
 - Nametags
 - Glasses
 - Are your socks long enough?
 - Make-up (for everyone)
 - Posture
 - Watch nervous movements, tics
 - Voice
 - Vary your pitch and tone
 - No up speak
 - Don’t trail off at end of sentences
 - Watch for verbal tics (repetitive phrases)
 - d. Commandment
 - THOU SHALT NOT LIE
8. Media Venues
- a. Talk show
 - Friendly

- Personality-driven; focus on the host
 - Great opportunity to air your commercials
 - Live format and “lively”
 - Cosmetics key; image tells the story
 - Energy, energy, energy
 - Talk to the interviewer, not the camera
 - Know the format in advance
 - Find out what other guests will be on
- b. Stand-ups
- Most common TV encounter
 - Choose a supportive backdrop
 - Taped, not live
 - Edited
 - Put question in answer
 - Talk to the interviewer, not the camera
 - ALWAYS “have something to add”
 - Cosmetics important...image is everything
- c. Remote
- Live format --- via satellite
 - Stay focused on interviewer (camera); hard when you can’t see them
 - Pay careful attention to directions from studio staff
 - Use commercials!
- d. Confrontational
- Live or live to tape
 - Will probably get “help” in preparing---ask for it!
 - Don’t repeat negatives
 - Correct inaccuracies
 - Rephrase questions to include commercials
 - Don’t lose your cool!
 - You won’t “win” but staying even with host is victory itself
9. Media availability
- “Press conference”
 - Use this method to communicate same message to large group
 - Always limit scope of questions with statement
 - Specify the length
 - Defer answers if necessary
 - Print
 - Most Common
 - Daily, Weekly, News Service
 - Local, National, Trade
 - Depth of coverage
 - Preparation is still key!
 - Length of interview
 - Commercials

APPENDIX F - SURVEY ANALYSIS USING S-PLUS 6.1.2

The survey was developed and reviewed by the Naval Postgraduate School Institutional Review Board throughout the month of July 2003 and prepared for web publication using the “creator” function of the Survey Said™ software suite. By August 5, 2003 the survey was published online and responses solicited through September 10, 2003, giving about a month to collect demographic data on Navy officer respondents.⁷⁰ Data was collected on the NPS Internet server and downloaded into both the survey software, Survey Said™, database file and a spreadsheet format, using Microsoft Excel.

For this study, the data is presented after being analyzed two ways. First, in order to conduct any type of inference, a statistical procedure called nonparametric methods was applied to a portion of the survey questions. Secondly, the use of statistical and graphical measurements of the response rate of the survey subjects is included in detail in [Appendix C](#). Moreover, the assistance of a certified statistician is helpful when trying to analyze the data with the best statistical tool. Dr. Robert Koyak from the Operations Research Department at NPS was instrumental in ensuring the integrity of the analysis.

Nonparametric tests were the statistical method recommended by Dr. Koyak when doing any type of inference between variables of data. The word *nonparametric* contrasts these methods with statistical methods that are based on models of a specific form and use data to estimate the parameters in these models. Simply put, nonparametric tests do not require any specific form for the distribution of the population from which these survey samples come.

Several tests of the data were used: the Wilcoxon rank sum test, Spearman test, Kruskal-Wallis Test, and the Chi-Square test. But first the data had to be prepared prior to conducting the tests.

The Wilcoxon rank sum test was applied to the following questions: 1-13, 16-21, 25-28, and 33-39. Rank tests are nonparametric tests based on the ranks of

⁷⁰ The URL numbers reflect statistical data for FY 2003 starting October 2002 through June 2003 (Total 25,974) – 1110(Surface Warfare) 8,636; 1120(Subsurface Warfare) 3,773; 1310 and 1320 combined 13,565; Total number of Navy officers attempted to reach with survey was compiled with help from DMDC (East Coast). <http://www.dmde.osd.mil/>.

observations, their positions in a list ordered from smallest (rank 1) to largest. Tied observations receive the average of their ranks. The Wilcoxon rank sum test compares distributions to assess whether one has systematically larger values than the other. The Wilcoxon test is based on the Wilcoxon rank sum *statistic* W , which is the sum of the ranks of one of the samples.⁷¹ Using this test, between two variables, one is ranked and ordered the other is not.

Spearman's ρ is a nonparametric alternative to the standard correlation coefficient. Like many of the other nonparametric techniques, it is robust in the sense that it is not particularly sensitive to the shape of the distribution or the presence of outliers. Further, it only requires that the data be measured at the level of ordered categories, whereas the regular correlation coefficient measured numerical data.⁷² Using this test, the data of two variables for consideration are ordered.

The Kruskal-Wallis test compares several populations on the basis of independent random samples from each population. This is the one-way analysis of variance setting. The null hypothesis for the Kruskal-Wallis test is that the distribution of the response variable is the same in all the populations. The alternative hypothesis is that the responses are systematically larger in some populations than in others.

The Kruskal-Wallis statistic H can be viewed in two ways. It is essentially the result of applying one-way ANOVA to the ranks of the observations. It is also a comparison of the sums of the ranks for the several samples. When the sample sizes are not too small and the null hypothesis is true. H for comparing I populations has approximately the chi-square distribution with $I-1$ degrees of freedom. Use this approximate distribution to obtain P -values.⁷³

To test the H_0 that there is no association between the row and the column classifications, the chi-square test is used which compares the entire set of observed counts with the set of expected counts. First, take the difference between each observed

⁷¹ McCabe, G.P., Moore, D.S. *Introduction to the Practice of Statistics*. W.H. Freeman Company, NY. 3rd Ed., 1999, Ch 14, p. 4.

⁷² Morgan, C.J., and Siegel, A.F. *Statistics and Data Analysis, An Introduction*. John Wiley & Sons, Inc., 1996, 2nd Ed. p 564.

⁷³ Morgan, C.J., and Siegel, A.F. *Statistics and Data Analysis, An Introduction*. John Wiley & Sons, Inc., 1996, 2nd Ed. p 30.

count and its corresponding expected count, square these values so that they are all 0 or positive. A large difference means less if it comes from a cell with a large expected count, so divide each squared difference by the expected count, a kind of standardization. Finally, sum over all cells. The result is called the *chi-square statistic* X^2 . The chi-square statistic is a measure of how much the observed cell counts in a two-way table diverge from the expected cell counts. This statistic can be used when no ordering of variables is necessary.

If the expected counts and the observed counts are very different, a large value of X^2 will result. So large values of X^2 provide evidence against the null hypothesis. To obtain a P-value for the test, we need the sampling distribution of X^2 under the assumption that H_O (no association between the row and column variables) is true. We once again use the approximation, related to the normal approximation for binomial distributions, *the chi-square distribution*.

For each of the tests mentioned above, the p -value is sought. P-value is the probability, computed assuming that H_O is true, that the test statistic would take a value as extreme or more extreme than that actually observed. This is called the P-value of the test. The smaller the P-value, the stronger the evidence against the H_O provided by the data.

The P-value calculated can be compared with a fixed value that is regarded as decisive. This amounts to announcing in advance how much evidence against the H_O will be required to reject H_O . The decisive value of P is called *significance level*. It is denoted by the Greek letter alpha. If $\alpha = 0.05$ is chosen (which was done in this study), it requires that the data give evidence against H_O so strong that it would happen no more than 5% of the time (1 time in 20) when H_O is true. If $\alpha = 0.01$ is chosen, it insists on stronger evidence against H_O , evidence so strong that it would only appear 1% of the time (1 time in 100) of H_O is in fact true.

The following are study questions used to make comparisons between the data sets of several specific questions. The logic of this decision was to show some correlation between the data. It was here that the statistical tests were applied. Correlation is a measure of association between the data values of X and Y . Any conclusions about one

causing the other may use statistics as supporting evidence, but require additional logic from outside the realm of statistics. The correlation quantifies the extent of the association, but usually cannot indicate why things are related. This, along with other methods, provides the evidence needed in determining if there are biases amongst URL Navy officerNavy officers towards the media (refer to Appendix C for detailed description of questions).

1. Questions 8 and 9 (political views) vs. Questions 1, 2, 3, 4, 5, 6, 7, 10, 11, 12, and 13 (demographic: rank, specialty, birth year, year commissioned, commissioning source, sex, education level, father's education level, mother's level of education, home of record, race/ethnicity) -

***** Q1 vs Q8 *****

```
> tt <- !is.na(Q1.ordered) & !is.na(Q8.ordered)
```

```
> sum(tt)
```

```
[1] 87
```

```
> table(Q1.ordered,Q8.ordered)
```

very conservative somewhat conservative moderate somewhat liberal very liberal

| | | | | | |
|------|---|----|----|---|---|
| ENS | 1 | 1 | 2 | 0 | 0 |
| LTJG | 0 | 1 | 3 | 0 | 0 |
| LT | 7 | 23 | 15 | 4 | 1 |
| LCDR | 4 | 6 | 5 | 0 | 1 |
| CDR | 1 | 5 | 2 | 1 | 0 |
| CAPT | 1 | 3 | 0 | 0 | 0 |

```
> cor.test(as.numeric(Q1.ordered[tt]),as.numeric(Q8.ordered[tt]), method = 'spearman')
```

Spearman's rank correlation

data: as.numeric(Q1.ordered[tt]) and as.numeric(Q8.ordered[tt])

normal-z = -1.3516, p-value = 0.1765

alternative hypothesis: true rho is not equal to 0

sample estimates: rho -0.1457365

```
> # Treating military rank as a non-ordered variable, use Kruskal-Wallis
```

```
> kruskal.test(as.numeric(Q8.ordered[tt]),as.factor(Q1.ordered[tt]))
```

Kruskal-Wallis rank sum test

data: as.numeric(Q8.ordered[tt]) and as.factor(Q1.ordered[tt])

Kruskal-Wallis chi-square = 3.9203, df = 5, p-value = 0.561 alternative hypothesis: two.sided

```
***** Q2 vs Q8 *****
```

```
> tt <- !is.na(Jesse2[,2]) & !is.na(Q8.ordered)
```

```
> sum(tt)
```

```
[1] 88
```

```
> table(Jesse2[tt,2],Q8.ordered[tt])
```

very conservative somewhat conservative moderate somewhat liberal very liberal

| | | | | | |
|------------|---|----|---|---|---|
| Submariner | 3 | 12 | 1 | 0 | 0 |
|------------|---|----|---|---|---|

| | | | | | |
|-------------------------|----|----|----|---|---|
| Surface Warfare Officer | 12 | 27 | 26 | 5 | 2 |
|-------------------------|----|----|----|---|---|

```
> kruskal.test(as.numeric(Q8.ordered[tt]),Jesse2[tt,2])
```

Kruskal-Wallis rank sum test

data: as.numeric(Q8.ordered[tt]) and Jesse2[tt, 2]

Kruskal-Wallis chi-square = 5.3259, df = 1, p-value = 0.021

alternative hypothesis: two.sided

```
***** Q3 vs Q8 *****
```

```
> cor.test(as.numeric(Jesse2[tt,3]),as.numeric(Q8.ordered[tt]), method = 'spearman')
```

Spearman's rank correlation

data: as.numeric(Jesse2[tt, 3]) and as.numeric(Q8.ordered[tt])

normal-z = 2.457, p-value = 0.014

alternative hypothesis: true rho is not equal to 0

sample estimates: rho 0.2649544


```

> table(Q8.ordered[tt],Jesse2[tt,3])

1953 1954 1955 1957 1958 1959 1961 1962 1963 1964 1966 1967 1968 1969 1970 1971 1972
1973
very conservative  0  0  0  0  0  1  0  0  0  1  1  0  3  2  1  0  3  1
somewhat conservative  1  1  1  1  1  0  1  0  2  3  1  2  3  1  2  0  2  4
moderate  0  0  0  0  0  0  0  2  0  0  2  1  1  1  0  3  2  4
somewhat liberal  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0
very liberal  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  0

1974 1975 1976 1977 1978 1979
very conservative  0  0  1  0  0  0
somewhat conservative  4  5  3  0  0  1
moderate  4  2  1  0  2  2
somewhat liberal  3  0  0  1  0  0
very liberal  0  0  0  1  0  0

> sum(tt)

[1] 87

***** Q4 vs Q8 *****

> tt <- !is.na(Jesse2[,4]) & !is.na(Q8.ordered)

> sum(tt)

[1] 87

> min(Jesse2[tt,4])

[1] 1977

> table(Q8.ordered[tt],Jesse2[tt,4])

1977 1979 1980 1981 1985 1986 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998
1999
very conservative  0  0  1  1  0  1  0  0  1  1  1  1  1  3  0  2  0
somewhat conservative  2  2  0  0  1  2  1  0  0  2  1  1  3  1  6  6  8  0

```

```

moderate 0 0 0 0 2 0 0 1 0 2 0 4 0 0 7 2 4 1
somewhat liberal 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 1 2 1
very liberal 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1

```

```
2001 2002 2003
```

```

very conservative 0 0 1
somewhat conservative 1 0 1
moderate 2 2 0
somewhat liberal 0 0 0
very liberal 0 0 0

```

```
> cor.test(as.numeric(Jesse2[tt,4]),as.numeric(Q8.ordered[tt]), method = 'spearman')
```

Spearman's rank correlation

data: as.numeric(Jesse2[tt, 4]) and as.numeric(Q8.ordered[tt])

normal-z = 1.9331, p-value = 0.0532

alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.2084567

```
***** Q5 vs Q8 *****
```

```
> tt <- !is.na(Jesse2[,5]) & !is.na(Q8.ordered)
```

```
> sum(tt)
```

```
[1] 88
```

```
> table(Jesse2[tt,5],Q8.ordered[tt])
```

```
very conservative somewhat conservative moderate somewhat liberal very liberal
```

| | very conservative | somewhat conservative | moderate | somewhat liberal | very liberal |
|--------------------------------|-------------------|-----------------------|----------|------------------|--------------|
| Enlisted Commissioning Program | 0 | 4 | 2 | 0 | 1 |
| OCS | 3 | 8 | 2 | 1 | 0 |
| Other | 2 | 1 | 2 | 0 | 0 |
| ROTC | 5 | 15 | 15 | 1 | 1 |
| USNA | 5 | 11 | 6 | 3 | 0 |

```
> kruskal.test(as.numeric(Q8.ordered[tt]),as.factor(Jesse2[tt,5]))
```

Kruskal-Wallis rank sum test

data: as.numeric(Q8.ordered[tt]) and as.factor(Jesse2[tt, 5])

Kruskal-Wallis chi-square = 2.9556, df = 4, p-value = 0.5653

alternative hypothesis: two.sided

***** Q6 vs Q8 *****

```
> table(Jesse2[,7])
```

Female Male

5 87

```
> tt <- !is.na(Jesse2[,7]) & !is.na(Q8.ordered)
```

```
> kruskal.test(as.numeric(Q8.ordered[tt]),as.factor(Jesse2[tt,7]))
```

Kruskal-Wallis rank sum test

data: as.numeric(Q8.ordered[tt]) and as.factor(Jesse2[tt, 7])

Kruskal-Wallis chi-square = 0.6038, df = 1, p-value = 0.4371

alternative hypothesis: two.sided

```
> table(Jesse2[,7])
```

Female Male

5 87

```
> tt <- !is.na(Jesse2[,7]) & !is.na(Q8.ordered)
```

```
> kruskal.test(as.numeric(Q8.ordered[tt]),as.factor(Jesse2[tt,7]))
```

Kruskal-Wallis rank sum test

data: as.numeric(Q8.ordered[tt]) and as.factor(Jesse2[tt, 7])

Kruskal-Wallis chi-square = 0.6038, df = 1, p-value = 0.4371

alternative hypothesis: two.sided

***** Q7 vs Q8 *****

```
> tt <- !is.na(Q7.ordered) & !is.na(Q8.ordered)

> sum(tt)

[1] 88

> table(Q7.ordered[tt],Q8.ordered[tt])
```

| | very conservative | somewhat conservative | moderate | somewhat liberal | very liberal |
|--------------------|-------------------|-----------------------|----------|------------------|--------------|
| high school | 1 | 0 | 0 | 0 | 0 |
| some college | 0 | 1 | 0 | 0 | 0 |
| college graduate | 4 | 10 | 2 | 0 | 2 |
| some graduate work | 5 | 15 | 12 | 4 | 0 |
| graduate degree | 5 | 13 | 13 | 0 | 0 |
| doctorate degree | 0 | 0 | 0 | 1 | 0 |

```
> cor.test(as.numeric(Q7.ordered[tt]),as.numeric(Q8.ordered[tt]),method = 'spearman')
```

Spearman's rank correlation

data: as.numeric(Q7.ordered[tt]) and as.numeric(Q8.ordered[tt])

normal-z = 1.2274, p-value = 0.2197

alternative hypothesis: true rho is not equal to 0

sample estimates: rho 0.1316027

***** Q10 vs Q8*****

```
> tt <- !is.na(Q10.ordered) & !is.na(Q8.ordered)

> sum(tt)

[1] 85

> table(Q10.ordered[tt],Q8.ordered[tt])
```

| | very conservative | somewhat conservative | moderate | somewhat liberal | very liberal |
|--------------------|-------------------|-----------------------|----------|------------------|--------------|
| high school | 3 | 5 | 5 | 0 | 0 |
| some college | 2 | 7 | 2 | 1 | 0 |
| college graduate | 3 | 14 | 10 | 1 | 0 |
| some graduate work | 1 | 0 | 3 | 1 | 0 |

| | | | | | |
|------------------|---|---|---|---|---|
| graduate degree | 5 | 8 | 3 | 1 | 0 |
| doctorate degree | 0 | 4 | 4 | 1 | 1 |

```
> cor.test(as.numeric(Q10.ordered[tt]),as.numeric(Q8.ordered[tt]),method = 'spearman')
```

Spearman's rank correlation

data: as.numeric(Q10.ordered[tt]) and as.numeric(Q8.ordered[tt])

normal-z = 0.993, p-value = 0.3207

alternative hypothesis: true rho is not equal to 0

sample estimates: rho 0.1083557

*****Q11 vs Q8*****

```
> tt <- !is.na(Q11.ordered) & !is.na(Q8.ordered)
```

```
> sum(tt)
```

```
[1] 87
```

```
> table(Q11.ordered[tt],Q8.ordered[tt])
```

very conservative somewhat conservative moderate somewhat liberal very liberal

| | | | | | |
|--------------------|---|----|---|---|---|
| high school | 3 | 13 | 2 | 1 | 0 |
| some college | 6 | 9 | 9 | 0 | 1 |
| college graduate | 5 | 11 | 9 | 1 | 0 |
| some graduate work | 0 | 1 | 1 | 3 | 1 |
| graduate degree | 1 | 2 | 6 | 0 | 0 |
| doctorate degree | 0 | 2 | 0 | 0 | 0 |

```
> cor.test(as.numeric(Q11.ordered[tt]),as.numeric(Q8.ordered[tt]),method = 'spearman')
```

Spearman's rank correlation

data: as.numeric(Q11.ordered[tt]) and as.numeric(Q8.ordered[tt])

normal-z = 2.3146, p-value = 0.0206

alternative hypothesis: true rho is not equal to 0

sample estimates: rho 0.2495948

2. Questions 1,2,4, and 5 (demographics: rank, specialty, year commissioned, commissioning source) vs. Question 17 (how well military fulfills its role to keep media and public informed) –

(Note: This was the semantic differential questions; attempt to evoke a different response from respondent based on different phrasing of same question.)

*****Q(1, 17), Spearman, No correlation:*****

```
well'))
> Q17.ordered <- ordered(Jesse2[,35],c('Not well at all','Not very well','Somewhat well','Very
```

```
well'))
> tt <- !is.na(Q1.ordered)
> sum(tt)
[1] 92
```

```
> Jesse2[!tt,1]
[1] NA
Levels (first 5 out of 6):
```

```
[1] "CAPT" "CDR" "ENS" "LCDR" "LT"
```

```
> cor.test(Q1.ordered[tt],Q17.ordered,method = 'spearman')
```

Problem in cor.test(Q1.ordered[tt], Q17.ordered, method = "spearman"...: x and y should be the same length

Use traceback() to see the call stack

```
> cor.test(Q1.ordered[tt],Q17.ordered[tt],method = 'spearman')
```

```

Spearman's rank correlation
data: Q1.ordered[tt] and Q17.ordered[tt]
normal-z = -1.3707, p-value = 0.1705
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.1436826
```

*****Q(2, 17), K-Wallis, No correlation:*****

```
> tt <- !is.na(Jesse2[,2])
> sum(tt)
[1] 93
```

```
> kruskal.test(as.numeric(Q17.ordered[tt]),Jesse2[,2])
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q17.ordered[tt]) and Jesse2[, 2]
Kruskal-Wallis chi-square = 0.0146, df = 1, p-value = 0.904
alternative hypothesis: two.sided
```

```
> table(Q17.ordered[tt],Jesse2[,2])
```

| | Submariner | Surface Warfare Officer |
|-----------------|------------|-------------------------|
| Not well at all | 1 | 9 |
| Not very well | 6 | 2 |
| Somewhat well | 7 | 37 |
| Very well | 2 | 8 |

*****Q(4, 17), Spearman, Weak correlation:*****

```
> tt <- Jesse2[,4] < 1900
> sum(tt)
[1] 1
> Jesse2[tt,4] <- NA
> tt <- !is.na(Jesse2[,4])
> sum(tt)
[1] 92
```

```
> cor.test(Jesse2[tt,4],Q17.ordered[tt],method = 'spearman')
```

Spearman's rank correlation
data: Jesse2[tt, 4] and Q17.ordered[tt]
normal-z = 1.4902, p-value = 0.1362
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.1562236

*****Q(5, 17), K-Wallis, Correlation:*****

```
> tt <- !is.na(Jesse2[,5])
> sum(tt)
[1] 93
```

```
> kruskal.test(as.numeric(Q17.ordered[tt]),Jesse2[tt,5])
```

Kruskal-Wallis rank sum test
data: as.numeric(Q17.ordered[tt]) and Jesse2[tt, 5]
Kruskal-Wallis chi-square = 10.2372, df = 4, p-value = 0.0366
alternative hypothesis: two.sided

```
> table(as.numeric(Q17.ordered[tt]),Jesse2[tt,5])
```

| | Enlisted | Commissioning | Program | OCS | Other | ROTC | USNA |
|---|----------|---------------|---------|-----|-------|------|------|
| 1 | 0 | 2 | 0 | 3 | 5 | | |
| 2 | 1 | 5 | 0 | 14 | 9 | | |
| 3 | 5 | 7 | 3 | 19 | 10 | | |
| 4 | 2 | 1 | 2 | 2 | 3 | | |

```
> table(Q17.ordered[tt],Jesse2[tt,5])
```

| | Enlisted | Commissioning | Program | OCS | Other | ROTC | USNA |
|-----------------|----------|---------------|---------|-----|-------|------|------|
| Not well at all | 0 | 2 | 0 | 3 | 5 | | |
| Not very well | 1 | 5 | 0 | 14 | 9 | | |
| Somewhat well | 5 | 7 | 3 | 19 | 1 | | |
| Very well | 2 | 1 | 2 | 2 | 3 | | |

```
> tt <- !is.na(Q1.ordered)
```

```
> sum(tt)
[1] 92
```

3. Questions 1,2,4 and 5 (demographics) vs. Questions 18, 19, and 20 (want, need, and right to know about military issues and operations) –

*****Q(1, 18), K-wallis, no correlation*****

-broken into respective categories:

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,36])
```

Kruskal-Wallis rank sum test

data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 36]

Kruskal-Wallis chi-square = 0.7017, df = 1, p-value = 0.4022

alternative hypothesis: two.sided

```
> table(Q1.ordered[tt],Jesse2[tt,36])
```

0 Terrorist threats

| | |
|--------|----|
| ENS 2 | 2 |
| LTJG 1 | 3 |
| LT 6 | 49 |
| LCDR 2 | 14 |
| CDR 2 | 7 |
| CAPT 0 | 4 |

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,37])
```

Kruskal-Wallis rank sum test

data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 37]

Kruskal-Wallis chi-square = 0.1298, df = 1, p-value = 0.7186

alternative hypothesis: two.sided

```
> table(Q1.ordered[tt],Jesse2[tt,37])
```

0 Counter-terrorist activities

| | |
|--------|----|
| ENS 0 | 4 |
| LTJG 1 | 3 |
| LT 20 | 35 |
| LCDR 4 | 12 |
| CDR 3 | 6 |
| CAPT 0 | 4 |

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,38])
```

Kruskal-Wallis rank sum test

data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 38]

Kruskal-Wallis chi-square = 2.058, df = 1, p-value = 0.1514

alternative hypothesis: two.sided

```
> table(Q1.ordered[tt],Jesse2[tt,38])
```

0 Military readiness

| | |
|--------|---|
| ENS 2 | 2 |
| LTJG 0 | 4 |

| | |
|--------|----|
| LT 6 | 49 |
| LCDR 2 | 14 |
| CDR 0 | 9 |
| CAPT 0 | 4 |

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,39])
```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 39]
Kruskal-Wallis chi-square = 0.0059, df = 1, p-value = 0.9387
alternative hypothesis: two.sided

```
> table(Q1.ordered[tt],Jesse2[tt,39])
```

| | |
|-----------------------------------|----|
| 0 Effect on reaching policy goals | |
| ENS 0 | 4 |
| LTJG 1 | 3 |
| LT 19 | 36 |
| LCDR 6 | 10 |
| CDR 1 | 8 |
| CAPT 1 | 3 |

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,40])
```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 40]
Kruskal-Wallis chi-square = 0.4078, df = 1, p-value = 0.5231
alternative hypothesis: two.sided

```
> table(Q1.ordered[tt],Jesse2[tt,40])
```

| | |
|-------------------|----|
| 0 Physical damage | |
| ENS 0 | 4 |
| LTJG 2 | 2 |
| LT 22 | 33 |
| LCDR 6 | 10 |
| CDR 5 | 4 |
| CAPT 1 | 3 |

```
> table(Q1.ordered[tt],Jesse2[tt,41])
```

| | |
|--------------------|----|
| 0 Human casualties | |
| ENS 4 | 0 |
| LTJG 1 | 3 |
| LT 23 | 3 |
| LCDR 6 | 10 |
| CDR 4 | 5 |
| CAPT 1 | 3 |

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,41])
```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 41]
Kruskal-Wallis chi-square = 1.031, df = 1, p-value = 0.3099
alternative hypothesis: two.sided

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,42])
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 42]
Kruskal-Wallis chi-square = 0.2878, df = 1, p-value = 0.5916
alternative hypothesis: two.sided

```

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,43])
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 43]
Kruskal-Wallis chi-square = 0.8973, df = 1, p-value = 0.3435
alternative hypothesis: two.sided

```

```
*****
```

```
Q(1,19)
```

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,44])
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 44]
Kruskal-Wallis chi-square = 0.9714, df = 1, p-value = 0.3243
alternative hypothesis: two.sided

```

```
> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,45])
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 45]
Kruskal-Wallis chi-square = 0.0256, df = 1, p-value = 0.8728
alternative hypothesis: two.sided

```

```
-----
Q(1, 18-20), K-wallis, no correlation:
```

```

> for (j in 44:59) {
+ cat('Column ',j,'\n')
+ print(kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,j]))}

```

```
Column 44
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.9714, df = 1, p-value = 0.3243
alternative hypothesis: two.sided

```

```
Column 45
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.0256, df = 1, p-value = 0.8728
alternative hypothesis: two.sided

```

```
Column 46
```

```

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 1.2388, df = 1, p-value = 0.2657

```

alternative hypothesis: two.sided

Column 47

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.5508, df = 1, p-value = 0.458
alternative hypothesis: two.sided

Column 48

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.8768, df = 1, p-value = 0.3491
alternative hypothesis: two.sided

Column 49

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 2.1117, df = 1, p-value = 0.1462
alternative hypothesis: two.sided

Column 50

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 1.2511, df = 1, p-value = 0.2634
alternative hypothesis: two.sided

Column 51

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.1163, df = 1, p-value = 0.733
alternative hypothesis: two.sided

Column 52

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 1.6252, df = 1, p-value = 0.2024
alternative hypothesis: two.sided

Column 53

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.2678, df = 1, p-value = 0.6048
alternative hypothesis: two.sided

Column 54

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 2.2356, df = 1, p-value = 0.1349

alternative hypothesis: two.sided

Column 55

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.6198, df = 1, p-value = 0.4311
alternative hypothesis: two.sided

Column 56

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.1292, df = 1, p-value = 0.7193
alternative hypothesis: two.sided

Column 57

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.3166, df = 1, p-value = 0.5737
alternative hypothesis: two.sided

Column 58

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.4372, df = 1, p-value = 0.5085
alternative hypothesis: two.sided

Column 59

Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.0269, df = 1, p-value = 0.8697
alternative hypothesis: two.sided

*****Q(2, 18-20), Chisq.test, No Correlation:*****

```
> tt <- !is.na(Jesse2[,2])  
> for (j in 36:59) {  
+   cat('Column ',j,'n')  
+   print(chisq.test(Jesse2[tt,2],Jesse2[tt,j])) }  

```

Column 36

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0436, df = 1, p-value = 0.8347

Column 37

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]

X-square = 0.0842, df = 1, p-value = 0.7717

Column 38

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 1.1716, df = 1, p-value = 0.2791

Column 39

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.8029, df = 1, p-value = 0.3702

Column 40

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 1.4355, df = 1, p-value = 0.2309

Column 41

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.1177, df = 1, p-value = 0.7315

Column 42

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0057, df = 1, p-value = 0.9399

Column 43

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0786, df = 1, p-value = 0.7792

Column 44

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0338, df = 1, p-value = 0.8541

Column 45

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.4949, df = 1, p-value = 0.4818

Column 46

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0036, df = 1, p-value = 0.952

Column 47

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.703, df = 1, p-value = 0.4018

Column 48

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.9078, df = 1, p-value = 0.3407

Column 49

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.2448, df = 1, p-value = 0.6208

Column 50

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.1037, df = 1, p-value = 0.7474

Column 51

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0036, df = 1, p-value = 0.952

Column 52

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0339, df = 1, p-value = 0.8538

Column 53

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.1377, df = 1, p-value = 0.7105

Column 54

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0016, df = 1, p-value = 0.9685

Column 55

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0449, df = 1, p-value = 0.8322

Column 56

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0229, df = 1, p-value = 0.8797

Column 57

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.0032, df = 1, p-value = 0.9551

Column 58

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.3689, df = 1, p-value = 0.5436

Column 59

Pearson's chi-square test with Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, j]
X-square = 0.552, df = 1, p-value = 0.4575

*****Q(4,18-20), K- Wallis, Column 52(Correlation), Column 54 (Weak Correlation)*****

```
> tt <- !is.na(Jesse2[,4])
> for (j in 36:59) {
+ cat('Column ',j,'\n')
+ print(table(Jesse2[tt,4],Jesse2[tt,j]))
+ print(kruskal.test(Jesse2[tt,4],Jesse2[tt,j])) }
```

Column 36

| | 0 Terrorist threats |
|------|---------------------|
| 1977 | 0 |
| 1979 | 0 |
| 1980 | 0 |
| 1981 | 0 |
| 1985 | 1 |
| 1986 | 1 |
| 1988 | 0 |
| 1989 | 0 |
| 1990 | 0 |
| 1991 | 2 |
| 1992 | 0 |
| 1993 | 1 |
| 1994 | 0 |
| 1995 | 0 |
| 1996 | 0 |
| 1997 | 2 |
| 1998 | 3 |
| 1999 | 0 |
| 2001 | 1 |
| 2002 | 2 |
| 2003 | 0 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]
 Kruskal-Wallis chi-square = 1.0674, df = 1, p-value = 0.3015
 alternative hypothesis: two.sided

Column 37

| | 0 Counter-terrorist activities |
|--------|--------------------------------|
| 1977 0 | 2 |
| 1979 0 | 2 |
| 1980 0 | 1 |
| 1981 0 | 1 |
| 1985 1 | 2 |
| 1986 2 | 2 |
| 1988 1 | 1 |
| 1989 0 | 1 |
| 1990 0 | 1 |
| 1991 2 | 4 |
| 1992 1 | 1 |
| 1993 1 | 5 |
| 1994 3 | 1 |
| 1995 0 | 2 |
| 1996 6 | 10 |
| 1997 3 | 9 |
| 1998 7 | 10 |
| 1999 1 | 2 |
| 2001 0 | 3 |
| 2002 0 | 2 |
| 2003 1 | 1 |

Kruskal-Wallis rank sum test
 data: Jesse2[tt, 4] and Jesse2[tt, j]
 Kruskal-Wallis chi-square = 0.0955, df = 1, p-value = 0.7573
 alternative hypothesis: two.sided

Column 38

| | 0 Military readiness |
|--------|----------------------|
| 1977 0 | 2 |
| 1979 0 | 2 |
| 1980 0 | 1 |
| 1981 0 | 1 |
| 1985 0 | 3 |
| 1986 0 | 4 |
| 1988 0 | 2 |
| 1989 0 | 1 |
| 1990 0 | 1 |
| 1991 1 | 5 |
| 1992 0 | 2 |
| 1993 1 | 5 |
| 1994 0 | 4 |
| 1995 0 | 2 |
| 1996 1 | 15 |
| 1997 2 | 10 |
| 1998 3 | 14 |
| 1999 0 | 3 |
| 2001 0 | 3 |
| 2002 2 | 0 |

2003 0 2

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 3.569, df = 1, p-value = 0.0589

alternative hypothesis: two.sided

Column 39

0 Effect on reaching policy goals

| | |
|--------|----|
| 1977 0 | 2 |
| 1979 1 | 1 |
| 1980 0 | 1 |
| 1981 0 | 1 |
| 1985 0 | 3 |
| 1986 1 | 3 |
| 1988 1 | 1 |
| 1989 0 | 1 |
| 1990 0 | 1 |
| 1991 3 | 3 |
| 1992 2 | 0 |
| 1993 3 | 3 |
| 1994 2 | 2 |
| 1995 0 | 2 |
| 1996 2 | 14 |
| 1997 5 | 7 |
| 1998 6 | 11 |
| 1999 1 | 2 |
| 2001 1 | 2 |
| 2002 0 | 2 |
| 2003 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.109, df = 1, p-value = 0.7413

alternative hypothesis: two.sided

Column 40

0 Physical damage

| | |
|--------|----|
| 1977 0 | 2 |
| 1979 2 | 0 |
| 1980 0 | 1 |
| 1981 0 | 1 |
| 1985 3 | 0 |
| 1986 0 | 4 |
| 1988 1 | 1 |
| 1989 0 | 1 |
| 1990 0 | 1 |
| 1991 3 | 3 |
| 1992 1 | 1 |
| 1993 4 | 2 |
| 1994 2 | 2 |
| 1995 0 | 2 |
| 1996 6 | 10 |
| 1997 3 | 9 |
| 1998 9 | 8 |
| 1999 1 | 2 |

| | | |
|------|---|---|
| 2001 | 1 | 2 |
| 2002 | 0 | 2 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.0504, df = 1, p-value = 0.8223

alternative hypothesis: two.sided

Column 41

0 Human casualties

| | | |
|------|---|----|
| 1977 | 0 | 2 |
| 1979 | 1 | 1 |
| 1980 | 1 | 0 |
| 1981 | 0 | 1 |
| 1985 | 3 | 0 |
| 1986 | 0 | 4 |
| 1988 | 1 | 1 |
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 3 | 3 |
| 1992 | 0 | 2 |
| 1993 | 3 | 3 |
| 1994 | 2 | 2 |
| 1995 | 0 | 2 |
| 1996 | 4 | 12 |
| 1997 | 5 | 7 |
| 1998 | 9 | 8 |
| 1999 | 1 | 2 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 2 | 0 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.7967, df = 1, p-value = 0.3721

alternative hypothesis: two.sided

Column 42

0 Quality of life

| | | |
|------|---|----|
| 1977 | 0 | 2 |
| 1979 | 0 | 2 |
| 1980 | 1 | 0 |
| 1981 | 0 | 1 |
| 1985 | 2 | 1 |
| 1986 | 2 | 2 |
| 1988 | 1 | 1 |
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 3 | 3 |
| 1992 | 2 | 0 |
| 1993 | 2 | 4 |
| 1994 | 2 | 2 |
| 1995 | 0 | 2 |
| 1996 | 4 | 12 |
| 1997 | 3 | 9 |

| | | |
|------|---|---|
| 1998 | 9 | 8 |
| 1999 | 0 | 3 |
| 2001 | 2 | 1 |
| 2002 | 2 | 0 |
| 2003 | 0 | 2 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.0145, df = 1, p-value = 0.9042

alternative hypothesis: two.sided

Column 43

0 Sexual misconduct

| | | |
|------|----|---|
| 1977 | 0 | 2 |
| 1979 | 2 | 0 |
| 1980 | 1 | 0 |
| 1981 | 0 | 1 |
| 1985 | 3 | 0 |
| 1986 | 2 | 2 |
| 1988 | 2 | 0 |
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 5 | 1 |
| 1992 | 2 | 0 |
| 1993 | 4 | 2 |
| 1994 | 3 | 1 |
| 1995 | 1 | 1 |
| 1996 | 14 | 2 |
| 1997 | 9 | 3 |
| 1998 | 16 | 1 |
| 1999 | 3 | 0 |
| 2001 | 3 | 0 |
| 2002 | 0 | 2 |
| 2003 | 2 | 0 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 1.7916, df = 1, p-value = 0.1807

alternative hypothesis: two.sided

Column 44

0 Terrorist threats

| | | |
|------|---|---|
| 1977 | 0 | 2 |
| 1979 | 1 | 1 |
| 1980 | 0 | 1 |
| 1981 | 0 | 1 |
| 1985 | 1 | 2 |
| 1986 | 1 | 3 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 0 | 6 |
| 1992 | 0 | 2 |
| 1993 | 1 | 5 |
| 1994 | 0 | 4 |

| | | |
|------|---|----|
| 1995 | 0 | 2 |
| 1996 | 3 | 13 |
| 1997 | 2 | 10 |
| 1998 | 5 | 12 |
| 1999 | 0 | 3 |
| 2001 | 0 | 3 |
| 2002 | 2 | 0 |
| 2003 | 0 | 2 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 1.3508, df = 1, p-value = 0.2451

alternative hypothesis: two.sided

Column 45

0 Counter-terrorist activities

| | | |
|------|----|----|
| 1977 | 1 | 1 |
| 1979 | 0 | 2 |
| 1980 | 0 | 1 |
| 1981 | 0 | 1 |
| 1985 | 1 | 2 |
| 1986 | 3 | 1 |
| 1988 | 2 | 0 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 1 | 5 |
| 1992 | 1 | 1 |
| 1993 | 4 | 2 |
| 1994 | 3 | 1 |
| 1995 | 0 | 2 |
| 1996 | 6 | 10 |
| 1997 | 6 | 6 |
| 1998 | 10 | 7 |
| 1999 | 1 | 2 |
| 2001 | 1 | 2 |
| 2002 | 0 | 2 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.2143, df = 1, p-value = 0.6434

alternative hypothesis: two.sided

Column 46

0 Military readiness

| | | |
|------|---|---|
| 1977 | 0 | 2 |
| 1979 | 0 | 2 |
| 1980 | 0 | 1 |
| 1981 | 0 | 1 |
| 1985 | 1 | 2 |
| 1986 | 0 | 4 |
| 1988 | 1 | 1 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 0 | 6 |
| 1992 | 0 | 2 |

| | | |
|------|---|----|
| 1993 | 1 | 5 |
| 1994 | 0 | 4 |
| 1995 | 0 | 2 |
| 1996 | 2 | 14 |
| 1997 | 3 | 9 |
| 1998 | 5 | 12 |
| 1999 | 0 | 3 |
| 2001 | 0 | 3 |
| 2002 | 2 | 0 |
| 2003 | 0 | 2 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 3.3539, df = 1, p-value = 0.067

alternative hypothesis: two.sided

Column 47

0 Effect on reaching policy goals

| | | |
|------|---|----|
| 1977 | 0 | 2 |
| 1979 | 1 | 1 |
| 1980 | 0 | 1 |
| 1981 | 0 | 1 |
| 1985 | 1 | 2 |
| 1986 | 1 | 3 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 3 | 3 |
| 1992 | 1 | 1 |
| 1993 | 3 | 3 |
| 1994 | 3 | 1 |
| 1995 | 0 | 2 |
| 1996 | 7 | 9 |
| 1997 | 5 | 7 |
| 1998 | 7 | 10 |
| 1999 | 2 | 1 |
| 2001 | 1 | 2 |
| 2002 | 0 | 2 |
| 2003 | 0 | 2 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.2095, df = 1, p-value = 0.6471

alternative hypothesis: two.sided

Column 48

0 Physical damage

| | | |
|------|---|---|
| 1977 | 2 | 0 |
| 1979 | 1 | 1 |
| 1980 | 1 | 0 |
| 1981 | 0 | 1 |
| 1985 | 2 | 1 |
| 1986 | 2 | 2 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |

| | | |
|------|----|---|
| 1991 | 5 | 1 |
| 1992 | 0 | 2 |
| 1993 | 3 | 3 |
| 1994 | 2 | 2 |
| 1995 | 1 | 1 |
| 1996 | 8 | 8 |
| 1997 | 6 | 6 |
| 1998 | 11 | 6 |
| 1999 | 3 | 0 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.8282, df = 1, p-value = 0.3628

alternative hypothesis: two.sided

Column 49

0 Human casualties

| | | |
|------|----|---|
| 1977 | 2 | 0 |
| 1979 | 1 | 1 |
| 1980 | 1 | 0 |
| 1981 | 0 | 1 |
| 1985 | 2 | 1 |
| 1986 | 1 | 3 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 1 | 0 |
| 1991 | 4 | 2 |
| 1992 | 0 | 2 |
| 1993 | 4 | 2 |
| 1994 | 2 | 2 |
| 1995 | 1 | 1 |
| 1996 | 7 | 9 |
| 1997 | 5 | 7 |
| 1998 | 11 | 6 |
| 1999 | 3 | 0 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 2 | 0 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 1.6263, df = 1, p-value = 0.2022

alternative hypothesis: two.sided

Column 50

0 Quality of life

| | | |
|------|---|---|
| 1977 | 2 | 0 |
| 1979 | 0 | 2 |
| 1980 | 1 | 0 |
| 1981 | 0 | 1 |
| 1985 | 1 | 2 |
| 1986 | 3 | 1 |
| 1988 | 1 | 1 |

| | | |
|------|----|----|
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 2 | 4 |
| 1992 | 1 | 1 |
| 1993 | 3 | 3 |
| 1994 | 2 | 2 |
| 1995 | 0 | 2 |
| 1996 | 5 | 11 |
| 1997 | 7 | 5 |
| 1998 | 10 | 7 |
| 1999 | 2 | 1 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.463, df = 1, p-value = 0.4962

alternative hypothesis: two.sided

Column 51

0 Sexual misconduct

| | | |
|------|----|---|
| 1977 | 2 | 0 |
| 1979 | 1 | 1 |
| 1980 | 1 | 0 |
| 1981 | 0 | 1 |
| 1985 | 3 | 0 |
| 1986 | 4 | 0 |
| 1988 | 2 | 0 |
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 6 | 0 |
| 1992 | 2 | 0 |
| 1993 | 5 | 1 |
| 1994 | 3 | 1 |
| 1995 | 1 | 1 |
| 1996 | 14 | 2 |
| 1997 | 9 | 3 |
| 1998 | 13 | 4 |
| 1999 | 3 | 0 |
| 2001 | 3 | 0 |
| 2002 | 2 | 0 |
| 2003 | 2 | 0 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.0607, df = 1, p-value = 0.8054

alternative hypothesis: two.sided

Column 52

0 Terrorist threats

| | | |
|------|---|---|
| 1977 | 1 | 1 |
| 1979 | 0 | 2 |
| 1980 | 0 | 1 |
| 1981 | 0 | 1 |
| 1985 | 2 | 1 |

| | | |
|------|---|----|
| 1986 | 1 | 3 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 1 | 5 |
| 1992 | 0 | 2 |
| 1993 | 0 | 6 |
| 1994 | 1 | 3 |
| 1995 | 0 | 2 |
| 1996 | 1 | 15 |
| 1997 | 4 | 8 |
| 1998 | 6 | 11 |
| 1999 | 1 | 2 |
| 2001 | 2 | 1 |
| 2002 | 2 | 0 |
| 2003 | 0 | 2 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 4.2853, df = 1, p-value = 0.0384

alternative hypothesis: two.sided

Column 53

0 Counter-terrorist activities

| | | |
|------|----|---|
| 1977 | 1 | 1 |
| 1979 | 0 | 2 |
| 1980 | 1 | 0 |
| 1981 | 1 | 0 |
| 1985 | 2 | 1 |
| 1986 | 3 | 1 |
| 1988 | 1 | 1 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 5 | 1 |
| 1992 | 2 | 0 |
| 1993 | 4 | 2 |
| 1994 | 4 | 0 |
| 1995 | 1 | 1 |
| 1996 | 10 | 6 |
| 1997 | 7 | 5 |
| 1998 | 12 | 5 |
| 1999 | 1 | 2 |
| 2001 | 3 | 0 |
| 2002 | 0 | 2 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.0777, df = 1, p-value = 0.7804

alternative hypothesis: two.sided

Column 54

0 Military readiness

| | | |
|------|---|---|
| 1977 | 0 | 2 |
| 1979 | 0 | 2 |
| 1980 | 0 | 1 |

| | | |
|------|---|----|
| 1981 | 1 | 0 |
| 1985 | 0 | 3 |
| 1986 | 1 | 3 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 2 | 4 |
| 1992 | 0 | 2 |
| 1993 | 1 | 5 |
| 1994 | 1 | 3 |
| 1995 | 0 | 2 |
| 1996 | 2 | 14 |
| 1997 | 2 | 10 |
| 1998 | 6 | 11 |
| 1999 | 0 | 3 |
| 2001 | 2 | 1 |
| 2002 | 2 | 0 |
| 2003 | 0 | 2 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 3.5469, df = 1, p-value = 0.0597

alternative hypothesis: two.sided

Column 55

0 Effect on reaching policy goals

| | | |
|------|---|----|
| 1977 | 1 | 1 |
| 1979 | 1 | 1 |
| 1980 | 0 | 1 |
| 1981 | 1 | 0 |
| 1985 | 0 | 3 |
| 1986 | 1 | 3 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 5 | 1 |
| 1992 | 1 | 1 |
| 1993 | 2 | 4 |
| 1994 | 3 | 1 |
| 1995 | 0 | 2 |
| 1996 | 8 | 8 |
| 1997 | 3 | 9 |
| 1998 | 7 | 10 |
| 1999 | 3 | 0 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.8618, df = 1, p-value = 0.3532

alternative hypothesis: two.sided

Column 56

0 Physical damage

| | | |
|------|---|---|
| 1977 | 1 | 1 |
|------|---|---|

| | | |
|------|----|----|
| 1979 | 1 | 1 |
| 1980 | 1 | 0 |
| 1981 | 1 | 0 |
| 1985 | 1 | 2 |
| 1986 | 2 | 2 |
| 1988 | 0 | 2 |
| 1989 | 0 | 1 |
| 1990 | 0 | 1 |
| 1991 | 5 | 1 |
| 1992 | 1 | 1 |
| 1993 | 3 | 3 |
| 1994 | 2 | 2 |
| 1995 | 1 | 1 |
| 1996 | 6 | 10 |
| 1997 | 8 | 4 |
| 1998 | 12 | 5 |
| 1999 | 2 | 1 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test
data: Jesse2[tt, 4] and Jesse2[tt, j]
Kruskal-Wallis chi-square = 1.4851, df = 1, p-value = 0.223
alternative hypothesis: two.sided

Column 57

| | 0 Human casualties | |
|------|--------------------|----|
| 1977 | 1 | 1 |
| 1979 | 1 | 1 |
| 1980 | 1 | 0 |
| 1981 | 1 | 0 |
| 1985 | 1 | 2 |
| 1986 | 1 | 3 |
| 1988 | 0 | 2 |
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 5 | 1 |
| 1992 | 1 | 1 |
| 1993 | 3 | 3 |
| 1994 | 2 | 2 |
| 1995 | 1 | 1 |
| 1996 | 6 | 10 |
| 1997 | 7 | 5 |
| 1998 | 10 | 7 |
| 1999 | 2 | 1 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 2 | 0 |

Kruskal-Wallis rank sum test
data: Jesse2[tt, 4] and Jesse2[tt, j]
Kruskal-Wallis chi-square = 0.7006, df = 1, p-value = 0.4026
alternative hypothesis: two.sided

Column 58

0 Quality of life

| | | |
|------|----|---|
| 1977 | 1 | 1 |
| 1979 | 0 | 2 |
| 1980 | 1 | 0 |
| 1981 | 1 | 0 |
| 1985 | 1 | 2 |
| 1986 | 4 | 0 |
| 1988 | 0 | 2 |
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 5 | 1 |
| 1992 | 1 | 1 |
| 1993 | 3 | 3 |
| 1994 | 2 | 2 |
| 1995 | 0 | 2 |
| 1996 | 8 | 8 |
| 1997 | 4 | 8 |
| 1998 | 10 | 7 |
| 1999 | 3 | 0 |
| 2001 | 1 | 2 |
| 2002 | 2 | 0 |
| 2003 | 1 | 1 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.0019, df = 1, p-value = 0.9654

alternative hypothesis: two.sided

Column 59

0 Sexual misconduct

| | | |
|------|----|---|
| 1977 | 1 | 1 |
| 1979 | 1 | 1 |
| 1980 | 1 | 0 |
| 1981 | 1 | 0 |
| 1985 | 3 | 0 |
| 1986 | 4 | 0 |
| 1988 | 1 | 1 |
| 1989 | 1 | 0 |
| 1990 | 1 | 0 |
| 1991 | 6 | 0 |
| 1992 | 1 | 1 |
| 1993 | 4 | 2 |
| 1994 | 3 | 1 |
| 1995 | 1 | 1 |
| 1996 | 10 | 6 |
| 1997 | 8 | 4 |
| 1998 | 13 | 4 |
| 1999 | 2 | 1 |
| 2001 | 2 | 1 |
| 2002 | 2 | 0 |
| 2003 | 2 | 0 |

Kruskal-Wallis rank sum test

data: Jesse2[tt, 4] and Jesse2[tt, j]

Kruskal-Wallis chi-square = 0.0874, df = 1, p-value = 0.7675

alternative hypothesis: two.sided

*****Q(5, 18-20) Chisq.test, no correlation: *****

```
> tt <- !is.na(Jesse2[,5])
> sum(tt)
[1] 93
> for (j in 36:59) {
+ cat('Column ',j,'\n')
+ print(table(Jesse2[tt,5],Jesse2[tt,j]))
+ print(chisq.test(Jesse2[tt,5],Jesse2[tt,j])) }
Column 36
```

0 Terrorist threats

| | | |
|---------------------|---|----|
| Enlisted Com. Prog. | 1 | 7 |
| OCS | 1 | 14 |
| Other | 0 | 5 |
| ROTC | 6 | 32 |
| USNA | 5 | 22 |

Pearson's chi-square test without Yates' continuity correction

data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 2.0604, df = 4, p-value = 0.7246
Column 37

0 Counter-terrorist activities

| | | |
|--------------------------------|----|----|
| Enlisted Commissioning Program | 3 | 5 |
| OCS | 5 | 10 |
| Other | 1 | 4 |
| ROTC | 11 | 27 |
| USNA | 9 | 18 |

Pearson's chi-square test without Yates' continuity correction

data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 0.6192, df = 4, p-value = 0.9609
Column 38

0 Military readiness

| | | |
|--------------------------------|---|----|
| Enlisted Commissioning Program | 2 | 6 |
| OCS | 1 | 14 |
| Other | 0 | 5 |
| ROTC | 4 | 34 |
| USNA | 3 | 24 |

Pearson's chi-square test without Yates' continuity correction

data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 2.5612, df = 4, p-value = 0.6337
Column 39

0 Effect on reaching policy goals

| | | |
|--------------------------------|----|----|
| Enlisted Commissioning Program | 6 | 2 |
| OCS | 3 | 12 |
| Other | 1 | 4 |
| ROTC | 11 | 27 |
| USNA | 8 | 19 |

Pearson's chi-square test without Yates' continuity correction

data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 8.442, df = 4, p-value = 0.0767
Column 40

0 Physical damage

| | |
|--------------------------------|----|
| Enlisted Commissioning Program | 1 |
| OCS | 8 |
| Other | 3 |
| ROTC | 14 |
| USNA | 11 |

Pearson's chi-square test without Yates' continuity correction

data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 4.636, df = 4, p-value = 0.3267
Column 41

| | | |
|--------------------------------|----|----|
| 0 Human casualties | | |
| Enlisted Commissioning Program | 5 | 3 |
| OCS | 7 | 8 |
| Other | 3 | 2 |
| ROTC | 16 | 22 |
| USNA | 9 | 18 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 2.9546, df = 4, p-value = 0.5655
Column 42

| | | |
|--------------------------------|----|----|
| 0 Quality of life | | |
| Enlisted Commissioning Program | 4 | 4 |
| OCS | 5 | 10 |
| Other | 1 | 4 |
| ROTC | 15 | 23 |
| USNA | 12 | 15 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 1.6723, df = 4, p-value = 0.7957
Column 43

| | | |
|--------------------------------|----|---|
| 0 Sexual misconduct | | |
| Enlisted Commissioning Program | 8 | 0 |
| OCS | 11 | 4 |
| Other | 4 | 1 |
| ROTC | 31 | 7 |
| USNA | 21 | 6 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 2.5986, df = 4, p-value = 0.6271
Column 44

| | | |
|--------------------------------|---|----|
| 0 Terrorist threats | | |
| Enlisted Commissioning Program | 0 | 8 |
| OCS | 2 | 13 |
| Other | 0 | 5 |
| ROTC | 7 | 31 |
| USNA | 7 | 20 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 4.3404, df = 4, p-value = 0.3619

Column 45

| | | |
|--------------------------------|----|----|
| 0 Counter-terrorist activities | | |
| Enlisted Commissioning Program | 4 | 4 |
| OCS | 7 | 8 |
| Other | 2 | 3 |
| ROTC | 15 | 23 |
| USNA | 14 | 13 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]

X-square = 1.1275, df = 4, p-value = 0.8899
 Column 46

| | | |
|--------------------------------|---|----|
| 0 Military readiness | | |
| Enlisted Commissioning Program | 1 | 7 |
| OCS | 4 | 11 |
| Other | 0 | 5 |
| ROTC | 6 | 32 |
| USNA | 4 | 23 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 2.3084, df = 4, p-value = 0.6792
 Column 47

| | | |
|-----------------------------------|----|----|
| 0 Effect on reaching policy goals | | |
| Enlisted Commissioning Program | 5 | 3 |
| OCS | 7 | 8 |
| Other | 0 | 5 |
| ROTC | 13 | 25 |
| USNA | 10 | 17 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 5.84, df = 4, p-value = 0.2114
 Column 48

| | | |
|--------------------------------|----|----|
| 0 Physical damage | | |
| Enlisted Commissioning Program | 3 | 5 |
| OCS | 11 | 4 |
| Other | 3 | 2 |
| ROTC | 18 | 20 |
| USNA | 16 | 11 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 4.1659, df = 4, p-value = 0.384
 Column 49

| | | |
|--------------------------------|----|----|
| 0 Human casualties | | |
| Enlisted Commissioning Program | 5 | 3 |
| OCS | 9 | 6 |
| Other | 3 | 2 |
| ROTC | 17 | 21 |
| USNA | 16 | 11 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 2.1322, df = 4, p-value = 0.7115

Column 50

| | | |
|--------------------------------|----|----|
| 0 Quality of life | | |
| Enlisted Commissioning Program | 6 | 2 |
| OCS | 9 | 6 |
| Other | 1 | 4 |
| ROTC | 17 | 21 |
| USNA | 13 | 14 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]

X-square = 4.8479, df = 4, p-value = 0.3033
 Column 51

| | | |
|--------------------------------|---------------------|---|
| | 0 Sexual misconduct | |
| Enlisted Commissioning Program | 8 | 0 |
| OCS | 13 | 2 |
| Other | 4 | 1 |
| ROTC | 32 | 6 |
| USNA | 21 | 6 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 2.4248, df = 4, p-value = 0.6582
 Column 52

| | | |
|--------------------------------|---------------------|----|
| | 0 Terrorist threats | |
| Enlisted Commissioning Program | 0 | 8 |
| OCS | 5 | 10 |
| Other | 0 | 5 |
| ROTC | 8 | 30 |
| USNA | 9 | 18 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 6.3487, df = 4, p-value = 0.1746
 Column 53

| | | |
|--------------------------------|--------------------------------|----|
| | 0 Counter-terrorist activities | |
| Enlisted Commissioning Program | 4 | 4 |
| OCS | 10 | 5 |
| Other | 5 | 0 |
| ROTC | 23 | 15 |
| USNA | 17 | 10 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 3.7136, df = 4, p-value = 0.4461
 Column 54

| | | |
|--------------------------------|----------------------|----|
| | 0 Military readiness | |
| Enlisted Commissioning Program | 2 | 6 |
| OCS | 4 | 11 |
| Other | 1 | 4 |
| ROTC | 10 | 28 |
| USNA | 3 | 24 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]
 X-square = 2.5503, df = 4, p-value = 0.6357

Column 55

| | | |
|--------------------------------|-----------------------------------|----|
| | 0 Effect on reaching policy goals | |
| Enlisted Commissioning Program | 3 | 5 |
| OCS | 9 | 6 |
| Other | 2 | 3 |
| ROTC | 18 | 20 |
| USNA | 8 | 19 |

Pearson's chi-square test without Yates' continuity correction
 data: Jesse2[tt, 5] and Jesse2[tt, j]

X-square = 4.1506, df = 4, p-value = 0.386
Column 56

| | | |
|--------------------------------|-------------------|----|
| | 0 Physical damage | |
| Enlisted Commissioning Program | 2 | 6 |
| OCS | 10 | 5 |
| Other | 5 | 0 |
| ROTC | 19 | 19 |
| USNA | 15 | 1 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 8.2059, df = 4, p-value = 0.0843
Column 57

| | | |
|--------------------------------|--------------------|----|
| | 0 Human casualties | |
| Enlisted Commissioning Program | 5 | 3 |
| OCS | 8 | 7 |
| Other | 5 | 0 |
| ROTC | 17 | 21 |
| USNA | 15 | 12 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 5.8272, df = 4, p-value = 0.2124
Column 58

| | | |
|--------------------------------|-------------------|----|
| | 0 Quality of life | |
| Enlisted Commissioning Program | 5 | 3 |
| OCS | 9 | 6 |
| Other | 1 | 4 |
| ROTC | 21 | 17 |
| USNA | 14 | 13 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 2.8473, df = 4, p-value = 0.5837
Column 59

| | | |
|--------------------------------|---------------------|----|
| | 0 Sexual misconduct | |
| Enlisted Commissioning Program | 7 | 1 |
| OCS | 11 | 4 |
| Other | 4 | 1 |
| ROTC | 27 | 11 |
| USNA | 19 | 8 |

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, j]
X-square = 1.1489, df = 4, p-value = 0.8864

4. Questions 1,2,4, and 5 (demographics) vs. Question 23 (factors affecting officers' willingness to share information with the media) –

*****Q(1, 23), Spearman, No correlation:*****

```
> for (j in 77:92) {
+ tt <- !is.na(Q1.ordered) & !is.na(Jesse2[,j])
```



```
+ cat(' ***** Column 'j',' *****', '\n')
+ print(cor.test(Q1.ordered[tt],Jesse2[tt,j],method = 'spearman')) }
```

***** Column 77 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = 1.2331, p-value = 0.2175
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.1292729

***** Column 78 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.3022, p-value = 0.7625
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.0316716

***** Column 79 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -1.0993, p-value = 0.2717
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.115226

***** Column 80 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.0113, p-value = 0.991
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.001172467

***** Column 81 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.0477, p-value = 0.9619
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.004994562

***** Column 82 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -1.147, p-value = 0.2514
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.1202272

***** Column 83 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = 0.2225, p-value = 0.8239
alternative hypothesis: true rho is not equal to 0

sample estimates: rho 0.02333641

***** Column 84 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.4996, p-value = 0.6174
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.05235937

***** Column 85 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.6565, p-value = 0.5115
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.06881313

***** Column 86 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.796, p-value = 0.4261
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.08343094

***** Column 87 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.2542, p-value = 0.7993
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.02664063

***** Column 88 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = -0.0364, p-value = 0.971
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.003805152

***** Column 89 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]
normal-z = 0.2004, p-value = 0.8412
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.02101146

***** Column 90 *****

Spearman's rank correlation
data: Q1.ordered[tt] and Jesse2[tt, j]

normal-z = -1.4559, p-value = 0.1454
 alternative hypothesis: true rho is not equal to 0
 sample estimates: rho -0.1526098

***** Column 91 *****

Spearman's rank correlation
 data: Q1.ordered[tt] and Jesse2[tt, j]
 normal-z = -0.5185, p-value = 0.6041
 alternative hypothesis: true rho is not equal to 0
 sample estimates: rho -0.05434149

***** Column 92 *****

Spearman's rank correlation
 data: Q1.ordered[tt] and Jesse2[tt, j]
 normal-z = -0.791, p-value = 0.429
 alternative hypothesis: true rho is not equal to 0
 sample estimates: rho -0.08290931

****Q(2, 23), Wilcoxon, Correlation: ****

```
> for (j in 77:92) {
+ tt1 <- !is.na(Jesse2[,j]) & Jesse2[,2] == 'Submariner'
+ tt2 <- !is.na(Jesse2[,j]) & Jesse2[,2] != 'Submariner'
+ cat(' ***** Column ',j, ' *****', '\n')
+ print(wilcox.test(Jesse2[tt1,j],Jesse2[tt2,j])) }
```

***** Column 77 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction Z = 0.4716, p-value = 0.6372
 alternative hypothesis: true mu is not equal to 0

***** Column 78 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction Z = 0.7245, p-value = 0.4688
 alternative hypothesis: true mu is not equal to 0

***** Column 79 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction Z = -1.0425, p-value = 0.2972
 alternative hypothesis: true mu is not equal to 0

***** Column 80 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction Z = -0.6557, p-value = 0.512

alternative hypothesis: true mu is not equal to 0

***** Column 81 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]
rank-sum normal statistic with correction $Z = 0.0821$, p-value = 0.9346
alternative hypothesis: true mu is not equal to 0

***** Column 82 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]
rank-sum normal statistic with correction $Z = -0.0666$, p-value = 0.9469
alternative hypothesis: true mu is not equal to 0

***** Column 83 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]
rank-sum normal statistic with correction $Z = 0.3644$, p-value = 0.7155
alternative hypothesis: true mu is not equal to 0

***** Column 84 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]
rank-sum normal statistic with correction $Z = -1.1875$, p-value = 0.235
alternative hypothesis: true mu is not equal to 0

***** Column 85 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]
rank-sum normal statistic with correction $Z = -0.1795$, p-value = 0.8576
alternative hypothesis: true mu is not equal to 0

***** Column 86 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]
rank-sum normal statistic with correction $Z = -1.1066$, p-value = 0.2685
alternative hypothesis: true mu is not equal to 0

***** Column 87 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]
rank-sum normal statistic with correction $Z = -1.578$, p-value = 0.1146
alternative hypothesis: true mu is not equal to 0

***** Column 88 *****

Wilcoxon rank-sum test
data: Jesse2[tt1, j] and Jesse2[tt2, j]

rank-sum normal statistic with correction $Z = -0.8916$, p-value = 0.3726
 alternative hypothesis: true mu is not equal to 0

***** Column 89 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction $Z = -0.8144$, p-value = 0.4154
 alternative hypothesis: true mu is not equal to 0

***** Column 90 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction $Z = -1.1133$, p-value = 0.2656
 alternative hypothesis: true mu is not equal to 0

***** Column 91 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction $Z = -2.1544$, p-value = 0.0312
 alternative hypothesis: true mu is not equal to 0

***** Column 92 *****

Wilcoxon rank-sum test
 data: Jesse2[tt1, j] and Jesse2[tt2, j]
 rank-sum normal statistic with correction $Z = -1.672$, p-value = 0.0945
 alternative hypothesis: true mu is not equal to 0

There were 32 warnings (use warnings() to see them)

> table(Jesse2[,91],Jesse2[,2])

Submariner Surface Warfare Officer

| | | |
|----|---|----|
| 0 | 2 | 6 |
| 1 | 7 | 24 |
| 2 | 3 | 3 |
| 3 | 2 | 11 |
| 4 | 1 | 8 |
| 5 | 1 | 10 |
| 6 | 0 | 1 |
| 7 | 0 | 5 |
| 8 | 0 | 4 |
| 9 | 0 | 2 |
| 10 | 0 | 3 |

> table(Jesse2[,92],Jesse2[,2])

Submariner Surface Warfare Officer

| | | |
|---|---|----|
| 0 | 5 | 6 |
| 1 | 6 | 37 |
| 2 | 1 | 10 |
| 3 | 1 | 7 |
| 4 | 2 | 5 |
| 5 | 1 | 7 |
| 6 | 0 | 1 |
| 7 | 0 | 1 |
| 8 | 0 | 3 |

```
****Q(4, 23), Spearman, No correlation: ****
> for (j in 77:92) {
```

```
+ tt <- !is.na(Jesse2[,j]) & !is.na(Jesse2[,4])
+ cat(' ***** Column ',j,' *****\n')
+ print(cor.test(Jesse2[tt,4],Jesse2[tt,j],method = 'spearman')) }
```

```
***** Column 77 *****
```

```
      Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.7395, p-value = 0.4596
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.07751452
```

```
***** Column 78 *****
```

```
      Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.4253, p-value = 0.6706
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.0445787
```

```
***** Column 79 *****
```

```
      Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = 0.3909, p-value = 0.6959
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.04098054
```

```
***** Column 80 *****
```

```
      Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.7033, p-value = 0.4819
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.07371331
```

```
***** Column 81 *****
```

```
      Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.079, p-value = 0.937
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.008278442
```

```
***** Column 82 *****
```

```
      Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = 1.2821, p-value = 0.1998
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.1344131
```

***** Column 83 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.5352, p-value = 0.5925
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.05610024

***** Column 84 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.1065, p-value = 0.9152
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.01116092

***** Column 85 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.0629, p-value = 0.9499
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.006582267

***** Column 86 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = 0.3645, p-value = 0.7155
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.03822136

***** Column 87 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.0829, p-value = 0.934
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.008679933

***** Column 88 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.6103, p-value = 0.5417
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.06396682

***** Column 89 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -1.0676, p-value = 0.2857
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.1119067

***** Column 90 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = 0.1189, p-value = 0.9054
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.01246728

***** Column 91 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = 0.063, p-value = 0.9498
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.006607873

***** Column 92 *****

Spearman's rank correlation
data: Jesse2[tt, 4] and Jesse2[tt, j]
normal-z = -0.443, p-value = 0.6578
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.04642898

*****Q(5, 23), K-Wallis, No corellation: *****
> for (j in 77:92) {
+ tt <- Jesse2[,j] != 'Other' & !is.na(Jesse2[,j])
+ cat(' ***** Column 'j, ' *****', '\n')
+ print(kruskal.test(Jesse2[tt,j], as.factor(as.character(Jesse2[tt,5]))))
+ print(table(as.character(Jesse2[tt,5]), Jesse2[tt,j])) }

***** Column 77 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 7.7244, df = 3, p-value = 0.0521
alternative hypothesis: two.sided

0 1 3 5 6 7 8 9 10
Enlisted Commissioning Program 0 1 0 0 1 0 1 1 4
OCS 3 0 1 0 0 0 1 0 10
ROTC 1 0 0 3 0 1 4 1 28
USNA 1 0 0 0 0 0 0 1 25

***** Column 78 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 1.5171, df = 3, p-value = 0.6783
alternative hypothesis: two.sided

0 1 2 3 5 6 7 8 9 10
Enlisted Commissioning Program 0 2 0 0 1 0 1 1 2
OCS 3 0 0 1 0 1 2 3 5 0
ROTC 1 5 0 1 4 1 5 9 5 7
USNA 1 1 4 1 5 1 5 3 2 4

***** Column 79 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 1.7372, df = 3, p-value = 0.6287
alternative hypothesis: two.sided

| | 0 | 1 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| OCS | 3 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 3 | 4 |
| ROTC | 2 | 1 | 0 | 1 | 1 | 1 | 3 | 9 | 5 | 15 |
| USNA | 1 | 0 | 2 | 1 | 0 | 1 | 3 | 5 | 7 | 7 |

***** Column 80 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 2.0887, df = 3, p-value = 0.5542
alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 1 | 1 |
| OCS | 3 | 0 | 0 | 3 | 0 | 2 | 1 | 1 | 1 | 2 | 2 |
| ROTC | 2 | 3 | 0 | 3 | 3 | 5 | 4 | 7 | 5 | 3 | 3 |
| USNA | 1 | 2 | 3 | 3 | 1 | 2 | 3 | 6 | 2 | 1 | 3 |

***** Column 81 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 2.0745, df = 3, p-value = 0.5571
alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|----|---|----|
| Enlisted Commissioning Program | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 1 |
| OCS | 3 | 0 | 0 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 0 |
| ROTC | 3 | 1 | 3 | 3 | 2 | 2 | 3 | 2 | 10 | 4 | 5 |
| USNA | 1 | 2 | 1 | 2 | 4 | 0 | 3 | 2 | 6 | 3 | 3 |

***** Column 82 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 1.0089, df = 3, p-value = 0.7991
alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 0 |
| OCS | 3 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 4 | 1 | 0 |
| ROTC | 3 | 3 | 4 | 4 | 3 | 6 | 2 | 3 | 6 | 1 | 3 |
| USNA | 1 | 3 | 3 | 2 | 2 | 5 | 4 | 2 | 0 | 0 | |

***** Column 83 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 6.3752, df = 3, p-value = 0.0947

alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 3 |
| OCS | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 3 | 5 | 0 |
| ROTC | 3 | 1 | 2 | 2 | 1 | 2 | 1 | 6 | 7 | 7 | 6 |
| USNA | 1 | 1 | 2 | 3 | 3 | 2 | 3 | 4 | 4 | 3 | 1 |

***** Column 84 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 1.0409, df = 3, p-value = 0.7914
alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 2 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 1 |
| OCS | 4 | 0 | 1 | 1 | 0 | 3 | 2 | 1 | 1 | 1 | 1 |
| ROTC | 3 | 4 | 1 | 4 | 1 | 6 | 3 | 5 | 4 | 2 | 5 |
| USNA | 1 | 3 | 3 | 1 | 4 | 3 | 2 | 3 | 1 | 3 | 3 |

***** Column 85 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 5.7184, df = 3, p-value = 0.1261
alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 1 | 1 | 1 | 0 |
| OCS | 4 | 0 | 2 | 3 | 2 | 2 | 0 | 0 | 1 | 1 | 0 |
| ROTC | 3 | 4 | 2 | 4 | 2 | 6 | 9 | 0 | 5 | 1 | 2 |
| USNA | 1 | 4 | 6 | 2 | 2 | 3 | 3 | 4 | 1 | 0 | 1 |

***** Column 86 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 1.267, df = 3, p-value = 0.737
alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|----|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 |
| OCS | 4 | 0 | 1 | 4 | 2 | 3 | 0 | 0 | 1 | 0 | 0 |
| ROTC | 3 | 12 | 2 | 2 | 5 | 6 | 2 | 2 | 3 | 0 | 1 |
| USNA | 1 | 15 | 0 | 1 | 3 | 3 | 2 | 1 | 0 | 0 | 1 |

***** Column 87 *****

Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))

Kruskal-Wallis chi-square = 2.809, df = 3, p-value = 0.422
 alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 3 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| OCS | 5 | 0 | 1 | 3 | 2 | 4 | 0 | 0 | 0 | 0 | 0 |
| ROTC | 4 | 5 | 3 | 4 | 6 | 8 | 1 | 1 | 2 | 0 | 4 |
| USNA | 1 | 5 | 4 | 3 | 4 | 5 | 3 | 0 | 1 | 0 | 1 |

***** Column 88 *****

Kruskal-Wallis rank sum test

data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))

Kruskal-Wallis chi-square = 3.6647, df = 3, p-value = 0.3

alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 5 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| OCS | 5 | 1 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 0 | 0 |
| ROTC | 4 | 8 | 7 | 1 | 5 | 4 | 2 | 2 | 3 | 2 | 2 |
| USNA | 1 | 8 | 2 | 1 | 4 | 4 | 1 | 4 | 1 | 1 | 1 |

***** Column 89 *****

Kruskal-Wallis rank sum test

data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))

Kruskal-Wallis chi-square = 5.087, df = 3, p-value = 0.1655

alternative hypothesis: two.sided

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Enlisted Commissioning Program | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| OCS | 4 | 1 | 0 | 1 | 0 | 4 | 3 | 1 | 1 | 0 | 0 |
| ROTC | 4 | 4 | 2 | 1 | 2 | 3 | 2 | 6 | 7 | 4 | 3 |
| USNA | 1 | 3 | 1 | 1 | 2 | 3 | 4 | 4 | 4 | 0 | 4 |

***** Column 90 *****

Kruskal-Wallis rank sum test

data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))

Kruskal-Wallis chi-square = 2.3409, df = 3, p-value = 0.5047

alternative hypothesis: two.sided

```

      0 1 2 3 4 5 6 7 8 9 10
Enlisted Commissioning Program 0 4 0 1 1 2 0 0 0 0 0
OCS 5 1 0 1 1 5 1 0 0 1 0

```

```

      ROTC 4 9 0 4 3 5 4 1 6 1 1
      USNA 1 9 3 0 2 6 1 2 3 0 0

```

***** Column 91 *****

```

      Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 0.6457, df = 3, p-value = 0.8859
alternative hypothesis: two.sided

```

```

      0 1 2 3 4 5 6 7 8 9 10
Enlisted Commissioning Program 0 2 0 2 1 3 0 0 0 0 0
OCS 3 2 2 2 1 3 0 0 2 0 0
ROTC 4 14 1 5 4 3 1 0 2 2 2
USNA 1 10 3 4 2 1 0 5 0 0 1

```

***** Column 92 *****

```

      Kruskal-Wallis rank sum test
data: Jesse2[tt, j] and as.factor(as.character(Jesse2[tt, 5]))
Kruskal-Wallis chi-square = 2.2573, df = 3, p-value = 0.5208
alternative hypothesis: two.sided

```

```

      0 1 2 3 4 5 6 7 8
Enlisted Commissioning Program 0 4 2 1 0 1 0 0 0
OCS 6 3 1 2 1 1 0 0 1
ROTC 4 19 4 2 4 3 1 0 1
USNA 1 13 4 3 2 2 0 1 1

```

5. Questions 1,2,4, and 5 (demographics) vs. Question 25 (media access to military)–

*****Q(1, 25), K-wallis, No correlation:*****

```

> tt <- !is.na(Q1.ordered) & !is.na(Jesse2[,94])
> sum(tt)
[1] 88

```

```

> kruskal.test(as.numeric(Q1.ordered[tt]),Jesse2[tt,94])

```

```

      Kruskal-Wallis rank sum test
data: as.numeric(Q1.ordered[tt]) and Jesse2[tt, 94]
Kruskal-Wallis chi-square = 0.7601, df = 2, p-value = 0.6838
alternative hypothesis: two.sided

```

```

> t(table(as.numeric(Q1.ordered[tt]),Jesse2[tt,94]))
      1 2 3 4 5 6

```

```

During military conflict? 1 1 8 4 1 2
In peacetime? 1 2 20 8 4 1

```

Other 2 1 23 4 4 1

```
> t(table(Q1.ordered[tt],Jesse2[tt,94]))
```

```

      ENS LTJG LT LCDR CDR CAPT
During military conflict? 1 1 8 4 1 2
      In peacetime? 1 2 20 8 4 1
      Other 2 1 23 4 4 1

```

*****Q(2, 25), Chisq.Test, No correlation:*****

```

> tt <- !is.na(Jesse2[,2]) & !is.na(Jesse2[,94])
> sum(tt)
[1] 89
> ?chisq.test
> chisq.test(Jesse2[tt,2],Jesse2[tt,94])

```

Warning messages:

Expected counts < 5. Chi-square approximation may not be appropriate. in:
chisq.test(Jesse2[tt,2],

Jesse2[tt, 94])

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 2] and Jesse2[tt, 94]
X-square = 0.9268, df = 2, p-value = 0.6291

```
> table(Jesse2[tt,2],Jesse2[tt,94])
```

```

      During military conflict? In peacetime? Other
Submariner 2 8 6
Surface Warfare Officer 15 28 30
*****Q(4, 25), K-wallis, Weak correlation:*****

```

```

> tt <- !is.na(Jesse2[,4]) & !is.na(Jesse2[,94]) & Jesse2[,4] > 1900
> sum(tt)
[1] 88
> kruskal.test(Jesse2[tt,4],Jesse2[tt,94])

```

Kruskal-Wallis rank sum test
data: Jesse2[tt, 4] and Jesse2[tt, 94]
Kruskal-Wallis chi-square = 4.8527, df = 2, p-value = 0.0884
alternative hypothesis: two.sided

```
> t(table(Jesse2[tt,4],Jesse2[tt,94]))
```

1977 1979 1980 1981 1985 1986 1988 1989 1990 1991 1992 1993 1994 1995
1996 1997 1998

```

During military conflict? 2 0 0 0 0 0 1 0 0 2 1 1 0 0 2 3 3
      In peacetime? 0 2 1 0 2 2 0 1 1 3 1 3 3 1 5 4 4
      Other 0 0 0 1 1 2 1 0 0 1 0 2 1 1 7 4 9

```

1999 2001 2002 2003

```

During military conflict? 0 1 0 1
In peacetime? 2 1 0 0
Other 1 1 2 1

```

```
> table(Jesse2[tt,4],Jesse2[tt,94])
```

```

During military conflict? In peacetime? Other
1977      2      0  0
1979      0      2  0
1980      0      1  0
1981      0      0  1
1985      0      2  1
1986      0      2  2
1988      1      0  1
1989      0      1  0
1990      0      1  0
1991      2      3  1
1992      1      1  0
1993      1      3  2
1994      0      3  1
1995      0      1  1
1996      2      5  7
1997      3      4  4
1998      3      4  9
1999      0      2  1
2001      1      1  1
2002      0      0  2
2003      1      0  1

```

```

*****Q(5, 25), Chisq.test, Weak Correlation:*****
(this method used when there are no ordering in variables)

```

```

> tt <- !is.na(Jesse2[,5]) & !is.na(Jesse2[,94])
> chisq.test(Jesse2[tt,5],Jesse2[tt,94])

```

Warning messages:

```

Expected counts < 5. Chi-square approximation may not be appropriate. in:
chisq.test(Jesse2[tt,5],

```

```

Jesse2[tt, 94])

```

```

Pearson's chi-square test without Yates' continuity correction
data: Jesse2[tt, 5] and Jesse2[tt, 94]
X-square = 2.4924, df = 8, p-value = 0.9621

```

```
> table(Jesse2[tt,5],Jesse2[tt,94])
```

```

During military conflict? In peacetime? Other
Enlisted Commissioning Program      1      5  2
OCS      4      5  6
Other      1      2  2
ROTC      6     14 14

```

| | | | |
|------|---|----|----|
| USNA | 5 | 10 | 12 |
|------|---|----|----|

```
> Xtab <-table(Jesse2[tt,5],Jesse2[tt,94])
> chisq.test(Xtab[c(2,4,5),])
```

Warning messages:

```
Expected counts < 5. Chi-square approximation may not be appropriate. in: chisq.test(Xtab[c(2,
4, 5), ])
```

```
Pearson's chi-square test without Yates' continuity correction
data: Xtab[c(2, 4, 5), ]
X-square = 0.6999, df = 4, p-value = 0.9513
```

```
> Xtab[c(2,4,5),]
```

During military conflict? In peacetime? Other

| | | | |
|------|---|----|----|
| OCS | 4 | 5 | 6 |
| ROTC | 6 | 14 | 14 |
| USNA | 5 | 10 | 12 |

6. Questions 1,2,4, and 5 (demographics) vs. Question 26 (PAOs role in media-military relationship) –

Ordering Q26:

```
> table(Jesse2[,96])
Agree Disagree Strongly agree Strongly disagree
20 54 5 10
```

```
> Q26.ordered <- ordered(Jesse2[,96],c('Strongly disagree','Disagree','Agree','Strongly agree'))
> table(Q26.ordered)
```

```
Strongly disagree Disagree Agree Strongly agree
10 54 20 5
```

```
> ?cat
> print(table(Jesse2[,90]))
0 1 2 3 4 5 6 7 8 9 10
10 26 3 6 7 19 6 3 10 2 1
```

```
> ?kruskal.test
> tt <- !is.na(Q26.ordered) & !is.na(Jesse2[,2])
> sum(tt)
[1] 89
```

***** Q1 vs Q26 *****

```
> table(Q1.ordered,Q26.ordered)
```

| | Strongly disagree | Disagree | Agree | Strongly agree |
|------|-------------------|----------|-------|----------------|
| ENS | 1 | 0 | 2 | 0 |
| LTJG | 0 | 4 | 0 | 0 |
| LT | 6 | 36 | 8 | 3 |
| LCDR | 2 | 9 | 4 | 1 |
| CDR | 0 | 4 | 4 | 1 |
| CAPT | 1 | 1 | 2 | 0 |

```
> #
> # Spearman test on Q1 vs Q26
> tt <- !is.na(Q1.ordered) & !is.na(Q26.ordered)
> sum(tt)
[1] 89

> cor.test(as.numeric(Q1.ordered[tt]),as.numeric(Q26.ordered[tt]), method = 'spearman')
```

Spearman's rank correlation

```
data: as.numeric(Q1.ordered[tt]) and as.numeric(Q26.ordered[tt])
normal-z = 1.5393, p-value = 0.1237
alternative hypothesis: true rho is not equal to 0
sample estimates: rho 0.1640969
```

```
> #
> # Treating military rank as a non-ordered variable, use Kruskal-Wallis
> #
> kruskal.test(as.numeric(Q26.ordered[tt]),as.factor(Q1.ordered[tt]))
```

Kruskal-Wallis rank sum test

```
data: as.numeric(Q26.ordered[tt]) and as.factor(Q1.ordered[tt])
Kruskal-Wallis chi-square = 5.2441, df = 5, p-value = 0.3868 alternative hypothesis: two.sided
```

*****Q(2, 26), K-Wallis, Correlation Found:*****

```
> kruskal.test(as.numeric(Q26.ordered[tt]),as.factor(Jesse2[tt,2]))
```

Kruskal-Wallis rank sum test

```
data: as.numeric(Q26.ordered[tt]) and as.factor(Jesse2[tt, 2])
Kruskal-Wallis chi-square = 8.8254, df = 1, p-value = 0.003
alternative hypothesis: two.sided
```

```
> table(Jesse2[tt,2],Q26.ordered[tt])
```

| | Strongly disagree | Disagree | Agree | Strongly agree |
|-------------------------|-------------------|----------|-------|----------------|
| Submariner | 5 | 10 | 1 | 0 |
| Surface Warfare Officer | 5 | 44 | 19 | 5 |
| - | | | | |

*****Q(4,26), Spearman's, Weak Correlation:*****

```
> tt <- !is.na(Q26.ordered) & !is.na(Jesse2[,4])
> sum(tt)
[1] 89
> cor.test(Q26.ordered[tt],Jesse2[tt,4],method = 'spearman')
```


Spearman's rank correlation

data: Q26.ordered[tt] and Jesse2[tt, 4]
normal-z = -1.9231, p-value = 0.0545
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.2049989

```
> table(Q26.ordered[tt],Jesse2[tt,4])
```

1998 1897 1977 1979 1980 1981 1985 1986 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997

| | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Strongly disagree | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 2 |
| Disagree | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 1 | 4 | 1 | 3 | 3 | 1 | 8 | 9 | 12 |
| Agree | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 4 | 0 | 3 |
| Strongly agree | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 |

| | | | | |
|-------------------|------|------|------|------|
| | 1999 | 2001 | 2002 | 2003 |
| Strongly disagree | 0 | 0 | 1 | 0 |
| Disagree | 3 | 3 | 0 | 0 |
| Agree | 0 | 0 | 0 | 1 |
| Strongly agree | 0 | 0 | 0 | 0 |

(Note: Got rid of 1897 date that was entered wrong)

```
> tt <- !is.na(Q26.ordered) & !is.na(Jesse2[,4]) & Jesse2[,4] > 1900
> sum(tt)
[1] 88
```

```
> cor.test(Q26.ordered[tt],Jesse2[tt,4],method = 'spearman')
```

Spearman's rank correlation
data: Q26.ordered[tt] and Jesse2[tt, 4]
normal-z = -1.7112, p-value = 0.087
alternative hypothesis: true rho is not equal to 0
sample estimates: rho -0.1834534

```
> t(table(Q26.ordered[tt],Jesse2[tt,4]))
```

| | | | | |
|------|-------------------|----------|-------|----------------|
| | Strongly disagree | Disagree | Agree | Strongly agree |
| 1977 | 0 | 1 | 1 | 0 |
| 1979 | 0 | 0 | 2 | 0 |
| 1980 | 0 | 0 | 1 | 0 |
| 1981 | 1 | 0 | 0 | 0 |
| 1985 | 0 | 2 | 0 | 1 |
| 1986 | 1 | 3 | 0 | 0 |
| 1988 | 0 | 0 | 2 | 0 |
| 1989 | 1 | 0 | 0 | 0 |
| 1990 | 0 | 1 | 0 | 0 |
| 1991 | 0 | 4 | 1 | 1 |
| 1992 | 0 | 1 | 1 | 0 |
| 1993 | 0 | 3 | 3 | 0 |

| | | | | |
|------|---|----|---|---|
| 1994 | 1 | 3 | 0 | 0 |
| 1995 | 0 | 1 | 0 | 1 |
| 1996 | 2 | 8 | 4 | 0 |
| 1997 | 1 | 9 | 0 | 2 |
| 1998 | 2 | 12 | 3 | 0 |
| 1999 | 0 | 3 | 0 | 0 |
| 2001 | 0 | 3 | 0 | 0 |
| 2002 | 1 | 0 | 0 | 0 |
| 2003 | 0 | 0 | 1 | 0 |

```
> cor.test(as.numeric(Q26.ordered[tt]),Jesse2[tt,4],method = 'spearman')
```

Spearman's rank correlation

data: as.numeric(Q26.ordered[tt]) and Jesse2[tt, 4]

normal-z = -1.7112, p-value = 0.087

alternative hypothesis: true rho is not equal to 0

sample estimates: rho -0.1834534

*****Q(5, 26), K-wallis test, Weak Correlation:*****

```
> tt <- !is.na(Q26.ordered) & !is.na(Jesse2[,5])
```

```
> kruskal.test(as.numeric(Q26.ordered[tt]),Jesse2[tt,5])
```

Problem: Syntax error: No opening parenthesis before unbalanced (")" on input line 1

```
> kruskal.test(as.numeric(Q26.ordered[tt]),Jesse2[tt,5])
```

Kruskal-Wallis rank sum test

data: as.numeric(Q26.ordered[tt]) and Jesse2[tt, 5]

Kruskal-Wallis chi-square = 0.4155, df = 4, p-value = 0.9812

alternative hypothesis: two.sided

APPENDIX G - UNCLASSIFIED RE-TRANSMISSION OF A SECDEF-CJCS P4

UNCLAS

SUBJ: COMMANDERS AND PUBLIC AFFAIRS

THIS MESSAGE IS AN UNCLASSIFIED RE-TRANSMISSION OF A SECDEF-CJCS P4 MESSAGE TO ALL COMBATANT COMMANDERS REGARDING SUPPORT OF PUBLIC AFFAIRS ACTIVITIES IN POTENTIAL FUTURE MILITARY OPERATIONS. IT IS BEING RE-TRANSMITTED AS A GENSER MESSAGE TO FACILITATE WIDER DISTRIBUTION TO ALL COMMANDERS, INTELLIGENCE, OPERATIONS, LOGISTICS AND COMMUNICATIONS OFFICERS AS WELL AS PAOS. THE ORIGINAL IS QUOTED BELOW:

1. (QUOTE) THIS IS A SECRETARY OF DEFENSE/CHAIRMAN OF THE JOINT CHIEFS OF STAFF MESSAGE.

2. MEDIA COVERAGE OF POTENTIAL FUTURE MILITARY OPERATIONS WILL, TO A LARGE EXTENT, SHAPE PUBLIC PERCEPTION OF THE NATIONAL SECURITY ENVIRONMENT NOW AND IN THE YEARS AHEAD. THIS HOLDS TRUE FOR THE US PUBLIC; THE PUBLIC IN ALLIED COUNTRIES, WHOSE OPINION CAN AFFECT THE DURABILITY OF OUR COALITION; AND PUBLICS IN COUNTRIES WHERE WE CONDUCT OPERATIONS, WHOSE PERCEPTIONS OF US CAN AFFECT THE COST AND DURATION OF OUR INVOLVEMENT.

3. THEREFORE, WE MUST:

A. ORGANIZE FOR AND FACILITATE ACCESS OF NATIONAL AND INTERNATIONAL MEDIA TO OUR FORCES, INCLUDING THOSE ENGAGED IN GROUND OPERATIONS. OUR GOAL IS TO GET IT RIGHT FROM THE START, NOT DAYS OR WEEKS INTO AN OPERATION. WE WILL COMMIT COMMUNICATIONS SYSTEMS AND TRAINED JOINT PUBLIC AFFAIRS TEAMS TO FACILITATE THE INTERNATIONAL PRESS GETTING A FIRST-HAND LOOK AT COALITION OPERATIONS.

B. PLAN TO DEDICATE LIFT AND LOGISTICAL SUPPORT TO MOVE PA AND MEDIA PERSONNEL AS WELL AS MEDIA PRODUCTS TO AND FROM THE FORWARD LOCATION. THIS WILL BE NECESSARY TO PRESENT OUR STORY IN A TIMELY MANNER.

C. HOLD DAILY BRIEFS IN THEATER WITH A LARGE GROUP OF INTERNATIONAL AS WELL AS NATIONAL PRESS. A NATURAL IMPULSE IS TO TALK TO REPORTERS FROM OUR OWN NATION -- WE ENCOURAGE YOU TO AGGRESSIVELY REACH OUT TO THOSE OF THE INTERNATIONAL PRESS AS YOU TELL OUR STORY - THEY, AND THE PUBLICS THEY SERVE, ALSO MUST UNDERSTAND WHY WE ARE ENGAGED.

D. PUT IN PLACE MECHANISMS AND PROCESSES FOR THE RAPID DISSEMINATION OF WEAPONS SYSTEMS VIDEO, ISR FOOTAGE, AND OPERATIONAL COMBAT CAMERA FOOTAGE BEFORE COALITION FORCES MOVE. WE WILL DELEGATE THE AUTHORITY FOR THE DECLASSIFICATION AND RELEASE OF THESE PRODUCTS TO THE LOWEST POSSIBLE LEVEL. APPROACH THESE DECISIONS WITH 'WHY NOT' RATHER THAN 'WHY?' OPERATIONAL PLANNING SHOULD INCORPORATE AND SUPPORT THESE EFFORTS AND INCLUDE A PUSH/PULL MECHANISM TO MAKE THE PRODUCTS READILY AVAILABLE TO A WIDER DOD AUDIENCE FOR EVENTUAL USE IN A VARIETY OF PUBLIC COMMUNICATION ACTIVITIES. THESE PLANS SHOULD ALSO SUPPORT THE EXPEDITIOUS MOVEMENT OF MEDIA PRODUCTS THAT TELL OUR STORY -- BOTH GOOD NEWS AND BAD -- FROM THE

FRONT LINES. THE GOAL FOR MOVING BOTH MEDIA PRODUCTS AND IMAGES SHOULD BE MINUTES OR HOURS NOT DAYS.

4. ALTHOUGH THE PA/MEDIA EFFORT MAY NOT BE PRECISELY SPELLED OUT, LIKE IN ANY OP PLAN TASK LIST, PROCEED ON THE BASIS THAT IT IS AN IMPLIED TASK FOR ALMOST ALL MISSIONS. OUR ULTIMATE STRATEGIC SUCCESS IN BRINGING PEACE AND SECURITY TO THIS REGION WILL COME IN OUR LONG-TERM COMMITMENT TO SUPPORTING THESE DEMOCRATIC IDEALS. LET'S TELL THE FACTUAL STORY -- GOOD OR BAD --BEFORE OTHERS SEED THE MEDIA WITH DISINFORMATION AND DISTORTIONS AS THEY MOST CERTAINLY WILL CONTINUE TO DO. OUR PEOPLE IN THE FIELD NEED TO TELL OUR STORY - ONLY COMMANDERS CAN ENSURE THE MEDIA GET TO THE STORY ALONGSIDE THE TROOPS. (UNQUOTE)

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